

Open Research Online

The Open University's repository of research publications and other research outputs

An Evaluation Of Trainee Teachers' Perceptions Of Mentoring

Thesis

How to cite:

Burrill, Paul Geoffrey (2003). An Evaluation Of Trainee Teachers' Perceptions Of Mentoring. EdD thesis The Open University.

For guidance on citations see [FAQs](#).

© 2003 The Author



<https://creativecommons.org/licenses/by-nc-nd/4.0/>

Version: Version of Record

Link(s) to article on publisher's website:

<http://dx.doi.org/doi:10.21954/ou.ro.0000c0ce>

Copyright and Moral Rights for the articles on this site are retained by the individual authors and/or other copyright owners. For more information on Open Research Online's data [policy](#) on reuse of materials please consult the policies page.

oro.open.ac.uk

Paul Geoffrey Burrill

R0455622

**An evaluation of trainee teachers' perceptions
of mentoring**

DOCTOR OF EDUCATION (EdD)

May 2003

ACKNOWLEDGMENTS

I am very grateful for the support and guidance given by my Open University tutors, Dr. Victoria Cooper (Stage 1) and Dr. Sally Heaney (Stage 2) whilst undertaking this dissertation. They created opportunities for me to think, question and redirect my work, which helped in the clarification of its purpose and in composing a logical and coherent argument.

I appreciate the help of Dr. Anne Riggs in reading earlier drafts of this dissertation and making suggestions for changes in academic content and structure. I am very grateful to the help given by Linda Barr to the presentational quality of some diagrams and tables.

The support given by my employers has been very valuable in terms of help, encouragement and creating opportunities to undertake research. I have named the Higher Education College around which this study was centred as readers of the work would clearly be able to identify the institution by the description of context provided. I am grateful to The Principal of St. Martin's College, Professor Chris Carr, for his consent and encouragement to use the college's name within this study. I very much appreciate the support and co-operation of my colleagues in the departments of Science and Technology and Modern Languages at the college. They allowed and encouraged me to undertake the research investigations needed for this thesis.

Finally, as many years of part-time academic study draw to an end, I wish to thank Anne-Marie Burrill, my wife, for her encouragement, help in structuring, proof-reading and redrafting the dissertation as well as for her tolerance whilst I have been undertaking thousands of hours of personal study.

1. ABSTRACT

This thesis on trainee teachers' perceptions of mentoring is concerned with the 1 Year PGCE (secondary), programme at St. Martin's College, Lancaster, England. The study took place between 1999-2002.

The use of the term *mentoring* and the set of processes it might involve have been integrated into Initial Teacher Training (ITT) courses in little over a decade. There is little published information about trainees' perceptions of mentoring, especially post DfEE 4/98.

The focus for the study was sharpened by key questions that investigated trainees' perceptions of *mentoring*, *mentoring strategies* related to the planning, teaching and evaluation of lessons, *reflective practice and professional development*.

Both quantitative and qualitative methodologies were used. Building on a pilot study (1999-2000) questionnaire, observational and interview data were collected from trainees in the main study (2000-2001). The entire cohorts of PGCE (sec) Science and Modern Foreign Languages trainees were used in the questionnaire surveys (N = 100) with smaller samples for the interview and observational studies. Data were also collected from school mentors and college tutors, which provided triangulation on perceptions of mentoring from different audiences. Additionally, via letter, 101 Course Leaders of secondary PGCE courses in other ITT institutions in England were contacted. Their responses helped to inform, update and relate this research to a wider field.

The findings show that trainee teachers sometimes had different perceptions of mentoring to their mentors. Most trainees believed that mentoring should be a nurturing process and individual feedback time with mentors and teachers should continue throughout the course and be built into their timetable. Solo

teaching was trainees' most valued teaching strategy but this often became a private, lonely and uncertain activity, again signalling the need for formal mentor support and feedback. The strategy of paired teaching practice placements in school departments conveyed advantages to most trainees as it allowed them to support each other both emotionally and with teaching materials. By the end of the course not only had trainees made cuts in lesson preparation time they had often reduced or stopped formalised reflection, such as keeping reflective diaries and writing lesson evaluations.

The new information from this study is used to suggest improvements for PGCE (sec) courses at St. Martin's College. However, due to National similarities in PGCE course structure (DfEE 4/98, DfES 02/02) a number of the findings from this study may also have value, in similar courses, in other ITT institutions.

2. CONTENTS	Page
Acknowledgements	1
1. Abstract	2 - 3
2. Contents	4 - 6
3. List of appendices	7 - 8
4. List of figures	9
5. List of tables	10 - 13
6. Glossary of terms	14 - 17
7. Introduction	18 - 28
The context of this study and my involvement in it -----	18
The focus of the research and a justification for its choice -----	20
8. Literature Review	29 - 94
The Professional Development of Teachers -----	29
Mentoring -----	45
Mentoring Strategies -----	55
Mentoring models with emphasis on Reflective Practice -----	64

9. Method	95 - 143
Quantitative and Qualitative research methodologies -----	97
A rationale for the use of combined methodologies in this study -----	102
Triangulation -----	105
Producing High Quality Research -----	106
Using a Grounded Theory approach for the collection and analysis of data -----	108
The nature of Ethical Practice in Educational Research -----	110
The construction and administration of the Research Instruments -----	117
- Questionnaires	
- Interviews	
- Observations	
- Tri-Partite Review (end of Teaching Practice Review)	
The sample population and data collection -----	134
Researcher influences on data collection -----	140
Establishing nationwide links and engaging in discussion about related mentoring research -----	141
10. Results and their analyses	144 - 216
Procedures used to summarise the results -----	144
Summary of the results and their analyses: -----	147
A. Mentoring -----	147
B. Mentoring Strategies related to the planning, teaching and evaluation of lessons -----	160
C. Reflective Practice -----	197
D. Professional Development -----	209

11. Discussion	217 - 279
Main conclusions from the findings of this study -----	218
A discussion of the main conclusions of this study -----	220
Conclusions and recommendations on the end of teaching practice review (Tri-Partite Review) -----	225
Suggestions for changes in mentoring practice on the PGCE (sec) programme that would benefit the majority of Science and Modern Foreign Languages trainees -----	228
A comparison of the findings of this research with existing knowledge -	235
The influence of DfES Circular 02/02 on the focal areas of this study --	249
Action Plan to address key recommendations -----	255
Strengths and weaknesses of this study -----	259
Opportunities for the dissemination of this research -----	269
Aspects for future research -----	275
 12. Bibliography	 280 - 293
 13. Appendices	 294 - 317

3. LIST OF APPENDICES	Page
1. Outline content and structure of the 1 Year PGCE (sec) programme and time-table	294
2. Questionnaire (draft 3) - used at the end of early teaching in the main study (November – December 2000)	296
3. Interview proforma (draft 2) – used at the end of early teaching in the main study (February – March 2000)	302
4. Introductory letter to trainees inviting them to interview	305
5. Introductory letter about the observational study	306
6. Observational proforma – used to record data about trainees and their mentors	307
7. Questions about a trainee’s end of teaching practice review meeting (the Tri-partite Review)	310
8. Examples of the procedure used for summarising data from the questionnaire surveys	311
9. Examples of the procedure used for summarising data from the observational surveys	313
10. Examples of the procedure used for summarising data from the interview surveys	314

11. Examples of the procedure used for summarising data from the Tri-Partite Review surveys	315
12. A copy of the letter sent to PGCE (sec) Science and Modern Foreign Languages Course Leaders in ITT Providers in England (May 2001)	316

4. LIST OF FIGURES	Page
8.1 The changes required in the college's PGCE programme to meet the requirements of DFE circular 9/92	37
8.2 Examples of skill development cycles	65
8.3 An integration of ideas for the combined use of mentoring models in ITT	92
8.4 The inter-relationship of the structure of ITT and mentoring perspectives with this study	94
9.1 Examples of research models	98
9.2 The setting for the interviews	129

5. LIST OF TABLES	Page
7.1 The research themes and key questions for investigation in this study	27
8.1 Definitions of mentoring in an ITT context, 1988 – 2000	52
9.1 A summary of the main characteristics of quantitative and qualitative research methods	101
9.2 A summary of good research practice	116
9.3 Summary of the research instruments used in the pilot study	118
9.4 Structural issues considered prior to drafting the questionnaire	120
9.5 The staged production of the questionnaire	122
9.6 Aspects to consider when undertaking an interview survey	126
9.7 The production of the interview proforma and the undertaking of the interviews	129
9.8 PGCE (sec) Science and Modern Foreign Languages trainee statistics 2000-2001	136
9.9 Summary of the data collection events and sample sizes in the study	138

9.10 The source of evidence collected to illuminate the key research questions of the study.	139
10.1 Trainees’ descriptions of mentoring and its purposes in the PGCE programme	147
10.2 Trainees’ ranked perceptions of mentoring and its purposes in the PGCE programme	148
10.3 Trainees’ comments on how mentoring had helped or hindered them	150
10.4 Trainees’ perceptions of the helpfulness of discussion with mentors	151
10.5 Trainees’ perceptions of the helpfulness of discussion with mentoring personnel	152
10.6 Trainees’ overall perception of the value of mentoring personnel	155
10.7 Trainees’ perceptions of what makes a good mentor	157
10.8 Trainees’ comments on the value of lesson observation (in School A, first teaching practice)	162
10.9 Trainees’ responses, in interview, to the assertion, “lesson observation was a good idea early on in the PGCE course”	164
10.10 Trainees’ comments on the value of collaborative teaching (in School A, first teaching practice)	168

10.11 Trainees’ responses, in interview, to the assertion, “collaborative teaching, with an experienced teacher, undermines your authority in class”	169
10.12 Trainees’ comments on the value of solo teaching	175
10.13 Trainees’ responses, in interview, to the assertion, “individual (solo) teaching is the best possible way to learn how to teach”	177
10.14 Trainees’ comments on the importance of solo teaching in the second teaching practice	179
10.15 Trainees’ views about the value of teacher observation, collaborative teaching and solo teaching at different phases in the PGCE course	181
10.16 Trainees’ perceptions of the advantages and disadvantages of paired teaching placements from trainees who experienced paired placements	183
10.17 Trainees’ comments, in interview, about their feelings on single departmental teaching placements	185
10.18 A comparison of similarities and differences from trainees, Subject Mentors and college tutors about the Tri-Partite Review	187
10.19 Trainees’ perceptions of the value of keeping reflective diaries	201
10.20 The proportion of trainees keeping reflective diaries	202

10.21 The ranked importance of factors encouraging the development of reflective practices in PGCE (sec) Science trainees	204
10.22 The time trainees' spent reflecting on and writing a lesson evaluation	206
10.23 The time trainees' spent preparing for one hour of teaching	206
10.24 Trainees' perceptions of how helpful the PGCE course was on the development and understanding of their specialist knowledge	210
10.25 Trainees' perceptions on how helpful the PGCE course was for their professional development as a teacher	212
10.26 Trainees' perceptions on how knowledgeable, confident and self-organised they felt to begin a teaching career	213
11.1 An Action Plan for the implementation of the key recommendations of this study	255
11.2 The major dissemination events of this research	269

6. GLOSSARY OF TERMS

Mentor role or structure	Definition and/or clarification
Mentor	<p>An experienced teacher, who has undertaken some college-based mentor training and is actively engaged with trainees (mentees) following PGCE (sec) ITT courses. Each trainee (mentee) works with one or more College Mentors and a Subject and Professional Mentor in each of their two school placements. Each trainee has at least five different mentors in their one year Post Graduate Certificate of Education (PGCE) course.</p> <p>From September 2002, PGCE will stand for <i>Professional Graduate Certificate of Education</i></p>
Mentee	<p>A trainee enrolled on a PGCE secondary one-year programme. The focus of this study was mentees in Science and Modern Foreign Languages at the College.</p>
School A	<p>The first school to which a PGCE trainee is attached for Teaching Practice. The schools used are mainly mixed comprehensives, although a few grammar and independent schools are also used. The school will cater for either 11-16 or 11-18 pupil age ranges and be located in Lancashire, Cumbria or North Yorkshire. School A attachment begins at the end of September and finishes at the end of January / early February. Appendix 1 gives an overview of the school/college timetable of the PGCE programme.</p>
School B	<p>The second school to which a PGCE trainee is attached for Teaching Practice. The schools used are as per School A above. School B attachment begins early in March and finishes near to the end of June. Appendix 1 gives the school/college timetable for the PGCE programme.</p>

School-based Initial Teacher Training (ITT) referred to as Initial Teacher Education (ITE) at the College	The PGCE programme operates under the legislation of (a) DfE circular 9/92, which established a PGCE course of which two-thirds takes place in a school setting and (b) DfEE circular 4/98 which establishes the assessment criteria or, “Standards for the Award of Qualified Teacher Status”. From 1 st September 2002, the programme follows the requirement of DfES circular 02/02.
Partnership School	These are the secondary schools (schools A and B) which are used to provide the school-based aspects of the PGCE courses. Partnership schools form contracts on a 1 yearly basis with the college. The school receives a payment for each trainee. Schools may take from one to ten PGCE students, with 4-6 being typical.
Subject Mentor	This is an experienced schoolteacher who usually holds a promoted post within a school subject department. “The school Subject Mentor is responsible for the delivery of the school-based training programme planned in collaboration with the relevant College Course Leaders” SMC, Secondary ITE Partnership, General Information Booklet, 2000/2001, p.31.
Professional Mentor	This is an experienced schoolteacher who usually holds a promoted post in the senior management of the school e.g. deputy headteacher. This post is equivalent to that of School Co-Ordinator under the Open University’s PGCE programme. “The school Professional Mentor has the responsibility for the delivery, supervision and assessment of all the trainee’s school-based work. S/he will liaise closely with the appropriate college staff on all aspects of the work including any input into the college-based part of the trainee programme.”

	SMC, Secondary ITE Partnership, General Information Booklet, 2000/2001, p.30.
College Mentor	<p>A member of the SMC academic staff who will have previously had a wide experience in secondary school teaching and in the management of their subject within the secondary school curriculum. A College Mentor will visit a trainee at least twice in each of their school teaching placements. Trainee observation, discussion and evaluation will take place along with collaboration with the school Subject and Professional Mentors.</p> <p>College Mentors also meet with their trainees during aspects of the college-based part of the PGCE courses.</p>
Mentoring Programme	The provision of trainee mentoring as described, <i>generally</i> in SMC, PGCE literature, produced by the Programme and Deputy Programme Directors and also as described and <i>specifically</i> in trainee booklets produced by the relevant Subject Course Leaders.
Mentor Training Course (MTG)	This is a three-day course run in the college for prospective school mentors. The course follows a general structure set out by the Deputy Programme Director but this is further developed and delivered by college subject Course Leaders. Each year an, ‘annual top-up Mentor Training Day’ is provided by the relevant subject Course Leader.
Mentor Training Group	A group of SMC academic staff who help design, up-date and extend the mentor training offered to school staff in support of the PGCE and other secondary ITT programmes. Certificates/Diplomas of Advanced Study in Education and the provision of a Mentoring Module as part of an MA(Ed.) degree course are being developed.
Professional Development	There are five assessment points during the year when trainees’ progress is assessed against, “The Standards for

Forms (PD1-5)	the Award of QTS". Future targets are set when each PD form is completed. The PD forms are completed by the Subject Mentor in collaboration with the trainee, Professional Mentor and College Mentor. PD3 and PD5 take place near to the end of each school placement and are informed by the end of teaching practice reviews or Tri-Partite Review.
Tri-Partite Reviews (TPR)	There are two of these meetings held with the trainee, School Subject of Professional Mentor and the College Tutor. Each meeting takes place towards the end of a trainee's teaching placement in School A (January) and School B (June). The meetings are significant assessment points for the student and they inform the completion of PD3 and PD5 by the Subject Mentor.
Observing Teaching and Learning Booklet (Science) Reflections on Practice, ML2 Booklet (MFL)	These booklets contain a set of focused tasks to direct the observation of trainees to significant aspects of a teacher's work. Trainees are expected to complete the booklet in the Autumn Term by making descriptive and analytical comment on observed teaching and pupil learning. The booklets are submitted for qualificatory assessment purposes in December.
Tracking Document (TD) (Science) <i>or</i> Formative Targets Booklet (Modern Foreign Languages)	These are booklets in which the trainee is asked to 'track', by recording evidence, for their achievement in meeting, "The Standards for the Award of QTS". The booklets are intended to help trainees participate in the Tri-Partite Reviews and justify their claim for statements in PD3 and PD5.

7. INTRODUCTION

The context for the study and my involvement in it

The college

St. Martin's College of Higher Education, Lancaster (SMC) was established in 1963 as a Church of England Teacher Training College for primary and secondary age-phases. The Institution has undergone rapid growth within the last ten years and now operates on a multi-site basis with major centres in Ambleside (previously Charlotte Mason College), Carlisle and smaller satellites in Barrow, Whitehaven, Workington and London (Urban Learning Foundation). The main base remains at Lancaster.

SMC has around 10,000 students following full or part-time courses at diploma, first degree, Masters or Doctorate level. The college's main focus, to some extent reflecting its Anglican Foundation, is upon the 'caring professions' - principally Teacher Education and Health courses such as Nursing, Radiography and Occupational Therapy. In 1997 SMC became the largest National Provider of places for full-time primary ITT trainees and the second largest for all ITT courses. There are programmes of study leading to qualified Teacher Status (QTS) for primary and secondary age-phases. These are provided at undergraduate (BA/BSc) and Postgraduate Graduate Certificate of Education (PGCE) level. SMC also offers its own Masters programme in Education for experienced teachers wishing to continue their professional development.

Outline of the 1 Year PGCE (secondary) Programme at St Martin's College

In September 2001 almost 400 trainees began the 1-year PGCE secondary age-phase course. The programme operates under the national requirements of DfEE 4/98 (DfES 02/02 from September 2002). There are Partnership arrangements formed for school-based work with around 120 secondary schools located in Lancashire, Cumbria and North Yorkshire. Since 1994

Mentor Training for Subject Mentors, overseeing the immediate mentoring needs of subject-specific trainees and for Professional Mentors co-ordinating all the trainees within the school, has been provided. PGCE trainees also receive mentoring from Higher Education Institution (HEI) college tutors throughout their course.

Appendix 1 contains an outline of the content and structure of the PGCE (sec) 1 Year programme. A timetable showing the distribution of school and college placements for the trainees is included. The duration of a PGCE course and the balance of school : college based work (24 weeks : 12 weeks) must have an impact upon trainees' perceptions of mentoring, the focus of this study.

My role within St. Martin's College (SMC)

In 1990, following 13 years of teaching within secondary schools (holding posts of Head of Biology and Head of Personal and Social Education within a large 11-18 comprehensive school), I moved to SMC. My job title is Senior Lecturer in Biology and Science Education. My role is roughly equally divided between managing and teaching undergraduate Biology courses and working within the PGCE (sec) programme. I am one of a team of four key Science PGCE tutors, although four other tutors have a minor involvement with the Science PGCE course.

I am involved in all aspects of the Science PGCE course from recruitment and selection of trainees at interview, through teaching of subject method work, professional work and tutorials to the observation of trainees undertaking teaching practice and liaison / collaboration with school mentors for moderation and student assessment purposes. I am also a member of the college's Mentor Training Group (MTG) for secondary ITT programmes. This means that *I have direct involvement in the mentoring of PGCE trainees and also in the processes of mentor training for our school mentors* represented by experienced teachers.

I was employed, for six years, as an Associate Lecturer with The Open University, within the North West Region (1994-1999). I was the

tutor/counsellor for ES821, Science Education, within the MA (Ed) programme. This experience developed and extended my knowledge and understanding of Science Education, reflective practice, and mentoring within a multi-education sector context. Consequently my own teaching experience, my direct involvement with ITT courses and interaction with experienced teachers, from all education sectors, make this study relevant, valuable and interesting to me.

The focus of the research and a justification for its choice

The purpose of this research was to learn more about trainees' perceptions of mentoring as this is an area where little, up-to-date, information is available. In addition to tutorial advice and guidance offered through the EdD course the research focus was discussed with a wide variety of my colleagues. These people, aware of the practical investigations needed to undertake the work, included the PGCE Programme Directorate, members of the college's Mentor Training Group (MTG) for secondary PGCE and personnel within the Departments of Science and Modern Languages. They all supported my work as it would, hopefully, provide a valuable addition of trainee-data, which is currently less formally and less substantially represented (Mentor Training Group meeting, 4/11/99). Information from college tutor and school mentor perspectives is routinely presented in PGCE tutor meetings and PGCE management meetings. These views are better known (and more often followed) than those of the teacher trainees who, except for occasional course consultative committee meetings have few opportunities to directly voice their opinions. Another reason for involving colleagues, from the outset of the work, was as a matter of politeness and for gaining their support and consent. These factors enabled the work to begin positively in a supported and appropriate ethical setting.

The data for this thesis were collected from 1999 (pilot study) to 2002 (main study). Originally, there were two broad areas of investigation, these being:

- (i) to investigate mentoring models and strategies used with PGCE students with the aim of identifying those aspects, perceived by students, as most valuable for lesson planning, teaching and evaluation.
- (ii) to discover whether students from two different subjects share the same opinions on the value of mentoring models and strategies (if they didn't then an argument for some subject modification to the general mentoring plan might be supported)

(Stage 1, Final Report, 2000, p.8)

As the work progressed it seemed sensible to adapt and change the original focus. The key features that signalled the need for change were:

- (i) developments in my own knowledge and understanding of relevant research
- (ii) changes in the PGCE course structure at SMC
- (iii) specific requests from colleagues for related action research on mentoring
- (iv) responses to the pilot study investigation - balance, style and wording of research instruments

The original areas for investigation were retained in a modified version for the full study and are embodied as (i) and (v) respectively in table 7.1. It became apparent in the Pilot Study (1999-2000) that trainees and most mentors were unfamiliar with the descriptors, “mentoring models” and “mentoring strategies” as used in published work on mentoring. In order to avoid this confusion the term, “mentoring activities” was used as this was more familiar and embraced both models and strategies. Trainees’ perceptions and evaluations of mentoring remain the main thrust of this work. The information

gained will be used to inform and improve the quality of mentoring provision, initial teacher education and the professional development of the trainee. The findings should also be of interest to experienced teachers who act as mentors as well as to college tutors setting and delivering the college's mentor training programme.

I had conducted research on reflective practices of Science students in 1995 and 1997 as part of Masters degrees in Education with Lancaster University and The Open University respectively. Comparison of these earlier findings with trainees following a revised, post DfEE 4/98 PGCE programme, would be interesting as it should show the impact of course changes on the reflective practices of trainees. This aspect also provided a longitudinal study approach to aspects of reflective practice in trainees and drew upon a large sample size ($N = 131$).

Additions to the original focal areas of study

Some of the additions came from my own ideas. These were to establish:

- (a) what trainees think about the value of paired teaching practice placements and
- (b) if and how trainees' perceptions of mentoring change from their early teaching to end-of-course experiences.

These questions were incorporated into the revised research focus as questions (iv) and (x) in table 7.1.

The key reasons for investigating paired trainee placements were that both Science and MFL PGCE courses used a variety of trainee placement arrangements - either single, paired, or (in MFL) multiple teaching practice placements. The most common teaching practice arrangements were paired or single placements. Arising from discussion on this topic in a Cross Faculty Educational Research seminar I gave (December 2001) these practices appeared to have evolved from programme, department or school requests. The impact of this pair placement arrangement on the trainee never seems to have been formally considered. Further discussion about pair teaching practice

placements took place when I was delivering a conference paper at The Annual Meeting of the Association for Science Education (ASE, Liverpool University, January 2002). There were representatives present from five PGCE Science ITT providers and all described cases similar to those in SMC. At the time of my discussion with him Orensen (2002) had undertaken research about student pair placement and knew of no published work on this topic. The lack of knowledge and understanding about the value of pair teaching practice placements suggests that the systems of school teaching placements have probably arisen to satisfy administrative rather than educational needs.

It was also evident from the early course data in the main study (early teaching questionnaire and interviews, 2000-2001) that the mentoring provision offered to trainees was of variable quality. If trainees saw value in paired (or multiple) teaching placements then an increased use of these could reduce the number of mentoring departments/schools to those identified, by trainees, as providing a high quality service. Thus this focal theme seemed a valuable addition to the work.

It is very clear to me, as a PGCE tutor, that most of our students change dramatically in terms of their knowledge, skills and confidence during the PGCE year. They often comment upon such changes themselves. It therefore seemed worthy to investigate if and how such changes might affect trainees' perceptions of mentoring and professional development. The same cohort of trainees was investigated during early teaching and at the end of their course. This data was subsequently used to suggest how high quality mentoring provision, that is responsive to the needs of trainees at different times in their PGCE course, could be provided.

Another research theme came from my EdD tutor who encouraged me to read and think more about the purposes of mentoring in providing teacher professional development. This theme (appearing as D. in table 7.1) reflects this aspect of the work. An important issue here was to use trainee data to create a description of professional development from the trainee perspective.

This could be compared to the nature of professional development advocated via 'Standards for award of QTS' (DfEE 4/98) and with that provided in published educational research. The trainee, DfEE and educational researcher perspective should provide interesting comparisons of the nature of professional development in contemporary PGCE courses seen from such different perspectives. The prime aim of any ITT course must surely be to establish appropriate professional development of its trainees to the highest level.

The perceptions of trainees and their college and school mentors to an end of teaching practice review (TPR) was investigated by question (vi) in table 7.1. and resulted from opportunistic research. I volunteered, on behalf of the PGCE Programme Team, to collect evidence and present a report on a new introduction (January 2000) to the PGCE course. This, Tri-Partite Review (TPR), involved an end of teaching placement discussion and assessment exercise between trainee, Subject Mentor and college tutor. I welcomed this opportunity for additional mentoring research as I could establish the opinions of trainees, school mentors and college tutors on the same, even if very specific, mentoring issues. This would provide a very useful strand to triangulate data allowing the comparison of perceptions on mentoring issues from the three parties. If differences existed, if only in some areas, an important claim could be made on the value of the information from the rest of the study. This claim would be that trainees' perceptions could sometimes be different from those of the course planners. Therefore, trainee opinion needed to be sought and considered seriously when planning for effective mentoring provision.

The broad field of investigation consequently widened by 2001 and became an exploration of:

- (i) trainees' experiences and evaluations of mentors and mentoring activities, specifically in relation to their preparation, teaching and evaluation of lessons. This would collect information on trainees' understanding of mentoring and the relationship of mentoring activities to different aspects of their teaching duties.
- (ii) trainee perceptions of appropriate professional development within a PGCE course. This would enable the perceived professional development needs of newly trained teachers to be compared with published opinion on the nature of teacher professional development.
- (iii) what trainees think about the value of paired teaching practice placements. The majority of the trainees undertook paired or multiple teaching practice placements in a school's subject department. The administrative processes that had generated this type of placement might additionally convey mentoring benefits to trainees. Evidence to substantiate this idea was needed.
- (iv) if and how trainees' perceptions of mentoring change from their early teaching to end-of-course experiences. This information should enable mentoring activities to be more suitably geared to trainees needs at different stages in their PGCE course.
- (v) whether trainees from two different subjects have similar experiences and opinions on aspects of mentoring. If they didn't then an argument for some subject modification to any general mentoring plan could be supported.
- (vi) the perceptions on one aspect of mentoring from trainees, school mentors and college mentors. This was an exercise in triangulation (the Tri-Partite Review) and showed the perspectives of the three key

players to a particular issue. In this way the thinking of trainees would be compared with that of their mentors. The exercise could help orientate mentors to the trainee perspective and make them better able to support their trainees.

A rationale for defining a sharp focus for investigation

The expansion of the focal areas for this study resulted in a lot of data being collected from a fairly broad area in two specialist subjects (Science and MFL). In order to enable a detailed treatment of data, suitable for the boundaries of this dissertation, a sharper focus was specified. Areas were selected that:

- (i) were related to the prime theme of this study and,
- (ii) where possible provided triangulated data e.g. data had been collected on a research theme by more than one means (such as by questionnaire and interview) or from more than one population (such as trainees, Subject Mentors and college tutors).

The remaining data has value and has already been collated and summarised. It could be used in further, related research as indicated in the, “aspects for future research” section in the final part of the discussion chapter

The sharp focal areas, derived from the broader field of investigation are set out over the page in table 7.1. Four themes for investigation were established that would be explored through the use of ten key questions.

Table 7.1. The research themes (*italics*) and key questions for investigation in the study.

A. Mentoring

- (i) What does ‘mentoring’ mean to trainees?
- (ii) What qualities do trainees look for in their mentors?

B. Mentoring Strategies related to planning, teaching and evaluation of lessons

- (iii) What are trainees’ views about the use and value of:
 - (a) observation of experienced teachers
 - (b) collaborative teaching
 - (c) solo teaching and co-analysis of practice?
- (iv) What do trainees think about the value of Paired Teaching Practice Placements?
- (v) What differences in perceptions exist between trainees and their mentors about the end of Teaching Practice Review (Tri-Partite Review)?

C. Reflective Practice

- (vi) What are trainees’ actions and values with regard to their reflective practices?
- (vii) How do reflective practices in the 2000-2001 Science trainee cohort

compare to 1995 and 1997 PGCE Science trainee cohorts?

- (viii) How does the time available to trainees during the PGCE course and mentor support affect reflective practice?

D. Professional Development

- (ix) What are trainees' perceptions on their professional development needs in the PGCE course?
- (x) What are the main changes in trainees' perceptions of mentoring needs from early to end of course teaching?

8. Literature Review

This chapter presents evidence, from published work, to demonstrate knowledge and understanding of those aspects of mentoring relevant to this thesis. The chapter is structured to provide a literature base covering the themes of study (mentoring, mentoring strategies, reflective practice and professional development). Firstly, an exploration of the nature of a profession and ideas for the effective professional development of teachers are presented. This is followed by a discussion of mentoring. Throughout an ITT course much of a trainee's early professional development will be provided through the processes and people involved with their mentoring. Mentoring strategies for example, the processes of mentoring are then presented followed by an examination and critique of the underlying mentoring models. Mentoring models provide a philosophical and theoretical base for the rationale of mentoring and detailed consideration of skill / competence and reflective mentoring models are presented.

The Professional Development of Teachers

A major purpose, for students, of any ITT course is that the course must encourage their professional development as new teachers. Mentoring, via the strategies, models and personnel involved is a key aspect in determining the early professional development of a teacher and their socialisation into the teaching profession. Prior to a discussion of mentoring it will be useful to explore what constitutes a profession and the ideas that exist for the effective professional development of new teachers.

What constitutes a profession?

There isn't an agreed definition as to what constitutes a profession or professional practice. Hoyle and John (1995) say:

Profession is an essentially contested conceptit defies
common agreement as to its meaning

(Hoyle and John, 1995, p.1)

They continue by saying that professions are more easily instanced than defined and give as their example “the learned professions”. Hoyle and John (1995) say that dictionaries describe qualities such as knowledge and responsibility or that professions have a special responsibility to their clients.

Fifteen years earlier in 1980 Hoyle, cited in Hoyle and John (1995) described ten features of a profession. These included performing a crucial social function, specific skills and the ability to draw upon a specialized body of knowledge. Professionalisation was seen as a lengthy process of education and training which involved the development of client-centred values. He also stated that professional practice should help shape public policy yet, itself, retain a high degree of autonomy. Hoyle proposed in 1980 (in Hoyle and John 1995) that lengthy training, responsibility and client-centredness are necessarily rewarded by high prestige and a high level of remuneration. The profession of teaching, now and in the past, doesn’t match with all of Hoyle’s criteria. Few would see teachers as having a significant role in shaping public policy. Indeed central government control exercised by legislation such as the 1988 Education Reform Act, which introduced the national curriculum, local management of schools and open enrolment of pupils, demonstrates quite the reverse.

Some high status professions such as law and medicine meet all of Hoyle’s criteria (established in 1980), compared to those such as teaching, nursing and social work which meet only some of the features. These, latter cases, might be referred to as the semi-professions. It seems logical to assume that at some arbitrary point a vocation would fail to achieve professional status when only a few qualities or only part engagement with the qualities defining a profession were met. This notion supports an earlier statement that there is no single definition as to what constitutes a profession.

Hoyle and John (1995) appear to centre their argument around three key criteria. They say that a profession involves *special knowledge, autonomy and responsibility*. Eraut (1994) talks of how occupations, claiming to be professions, have employed several modes of training. From this Eraut indicates that professions require:

a period of pupillage or internment where students spend a lot of time learning their craft from an expert.

enrolment in a 'professional college' outside the Higher Education system.

a qualifying exam normally set by the association for the occupation.

relevant study in a college or university leading to academic qualifications.

the collection of evidence of practical competence as a logbook or portfolio.

(Eraut, 1994, p.140)

Here Eraut (1994), like Hoyle and John (1995), refers to the development of academic (specialist) knowledge. This knowledge is obtained through lengthy study in academic institutions and through contact with experts of that profession.

Nicholls (1999) gives a definition of a profession. She describes the features of a profession as:

a substantial body of knowledge which the professional needs to acquire.

a lengthy period of training prior to joining the profession.

a profession is self-governed and publicly accountable.

(Nicholls, 1999, p.193)

This has similarities in special knowledge and lengthy training with the work mentioned earlier Hoyle and John (1995) and Eraut (1994) but ends by blending aspects of autonomy (self-governed) with public accountability. Written in 1999 Nicholl's definition perhaps reflects changes in expectations of the teaching profession. It appears that Hoyle's (1980) idea that professions shaped public policy have in twenty years been replaced by professions needing to be publicly accountable. Although Nicholls (1999) mentions self-government, which suggests professional autonomy, she steers clear of the notions of special, secret knowledge and thus the 'power' of professions, which appears in earlier work. It seems that legislation from central government has intervened to try to demystify the teaching profession and to increase its public accountability.

From this selection of published work, covering the last two decades, four key aspects to describe a profession emerge:

- (i) the possession of specialist knowledge and skills acquired through lengthy training.
- (ii) a client-centred responsibility.
- (iii) autonomy.
- (iv) public accountability.

Professional Growth

Professional growth occurs over a long period of time and at different rates and extents in different people (Berliner, 1989; Elliott and Calderhead, 1993). This suggests that the nature of professional growth in students following a 36 week PGCE course will not be complete and will vary between students. Berliner (1989) described changes in knowledge, belief and understanding as taking place during professional growth. He suggested that a range of experiences, environments and learning tasks needed to be provided to help trainees adjust to these changes. Elliott and Calderhead (1993) describe professional growth in a similar way, being multidimensional and at different rates for different

people. They note that professional growth needs to be based on prior learning, in a similar way that Ausubel (1968), Driver (1985) and Harlen (1992) recommend the introduction of new learning to pupils. Handal and Lauvas (1987) say that the most important influence in a teacher's style and development is their practical theory of teaching. They argue, in a similar way, that prior experiences i.e. previous knowledge, values and ideas can hinder or facilitate professional growth. They make the point that previous life experiences have, arguably, the single most powerful influence on forming the teacher professional. These factors are similar to the notions inherent in Social Constructivist learning theory associated with Vygotsky's work in the 1920s-30s and Bruner's work in the 1970s. This suggests that effective mentoring needs to establish such life experiences of the trainee and integrate these within the context of their professional development as a teacher.

Growth in teaching involves different forms of learning and Elliott and Calderhead (1993) make the point that learning about teaching through reading may not be the same thing as learning to teach. They do not suggest that reading is of no value but make the point that it is not the same thing as experiencing teaching first hand. They admit that reading may provide study cases, which enable the trainee to transfer skills / apply relevant knowledge to aspects of their own teaching.

Professional growth shares its development with Social Constructivist learning in that the individual learns by interaction with others. This suggests that a course should provide, in addition to individual support and teaching, frequent activities for discussion, peer collaboration and teacher intervention. Schools that take several trainees for training and school departments that take more than one trainee at a time can be seen as offering advantages to the professional development of trainees. Elliott and Calderhead (1993) suggest that professional growth requires support and challenge. Support being essential for cognitive as well as emotional development. Again support and challenge reflect aspects of a teacher's role in Social Constructivist learning, through their specific learning intervention and pupil-orientation activities.

Hargreaves and Fullan (1992) describe teacher development as involving knowledge and skill development. They say:

a teaching force that is more skilled and flexible in its teaching strategies and more knowledgeable about its subject matter is a teaching force able to improve the achievements of its pupils

(Hargreaves and Fullan, 1992, p.2)

They continue to discuss the advantages and disadvantages of this. The key advantages are that such a focus is practical, understandable and usable for teachers. Skill development courses can also be easily packaged, specifically focussed into workshops and are thus easy to administer. The main disadvantages in such development styles are that teachers are given little discretion (autonomy discouraged) and that they represent a truth, a positivistic style, which is unsuitable for the real world of teaching. There are similarities here with a competence-based model of mentoring due to the specific small task focus, each with a threshold of success, rather than an holistic perspective of teaching capability.

Hargreaves and Fullan (1992) argue that self-understanding is an important aspect in the professional development of a teacher. They state that teacher development involves more than just changing teachers' behaviours. It involves changing the person the teacher is. Although they admit that changes in behaviour may precede or follow on from changes in self-understanding they see this as less important than the idea that the person changes in their beliefs and attitudes to teaching. They continue by suggesting that personal development may impede professional development as many younger trainees may not have integrated a strong sense of self with the ability to relate this to their own work and to that of others. I support the latter notion here, that of collaborative work with teachers and its value. However, from personal experience, where PGCE trainees collaboratively plan and teach activities with experienced teachers, it is interesting how frequently mentors and trainees hold

such collaborative work in low status. Trainees are very strongly encouraged to concentrate on their own work and solo teaching as this is seen as highly valuable. In contrast collaborative planning and teaching appears to receive little emphasis.

Hargreaves and Fullan (1992) conclude by proposing that Teacher development involves an ecological change. I have presumed that this reference to ecological change follows the scientific description of such a term. Ecological change would therefore involve a consideration of the ecological niche of the trainee in their school placement ecosystem and this would be set within an educational biome. If this is the case the physical environment of teaching (affective issues), along with the learning occurring (cognitive issues) would be key issues. In order to explore, with the trainee, such interactions discussion, in a conducive setting, is vital. Hargreaves and Fullan (1992) say that critical reflection will not take place if there is neither time nor encouragement for it. A shortage of mentor/trainee planning time, or the opportunity to be released from teaching, make it difficult for teachers and trainees to plan together. School resources as well as conflicts in teachers' duties between the trainee and their pupils mean that supply cover is rarely used. To some extent Eraut's (1994) claim that trainees are most concerned with surviving the 'front-line action' in their teaching along with Fuller and Brown's (1975) class management / teacher survival concerns of trainees all support the desire for immediate, quick fix actions to be valued. Schon's (1983,1987) 'knowing-in-action' which is a conditioned, reflexive and thus subconscious behaviour replaces the deeper processes of conscious 'reflection in and on action' (Schon 1985, 1987). Hargreaves and Fullan (1992) describe the problem of reducing opportunities for such thoughtful or critical reflection in professional development with a quote from Potter:

Living in an enforced present tense is too much like being made to breast the rapids of a river. The attention has to engage with the raging white foam rather than the depths.

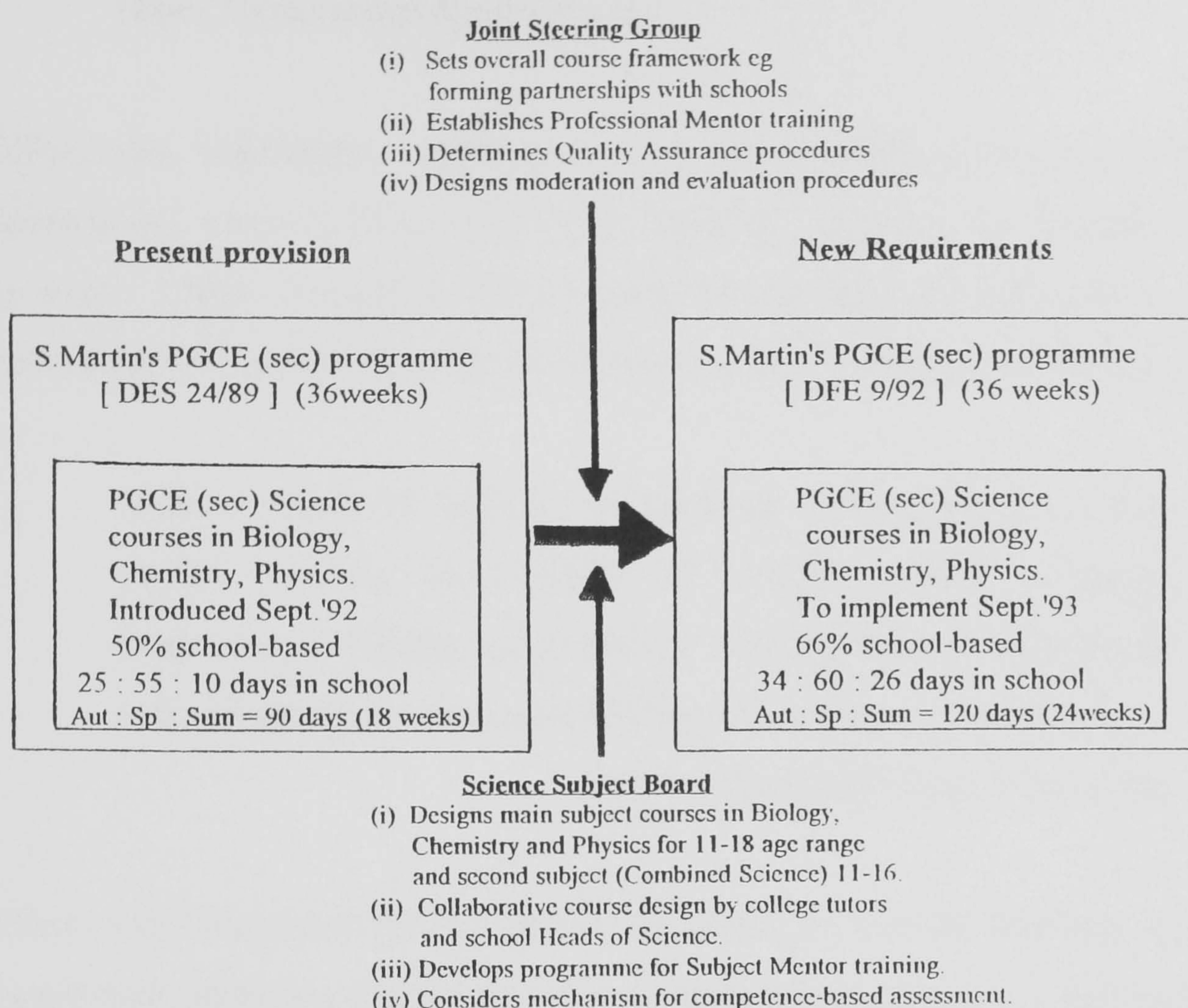
(Potter, 1986, *Ticket to Ride* in Hargreaves and Fullan, 1992, p.38)

They are suggesting that unless a suitable setting, time and value is given to critical reflection (Schon's, 1983,1987, Reflection in and on action) teacher development will fail to make this necessary ecological change. Teachers empowered by only subconscious actions (Schon's, 1983, 1987 Knowing in action) will not be experienced in formalised reflection about teaching and in this respect they will fail to develop their professional potential.

The implications of changes in the ITT curriculum on the nature of teacher professional development

The implementation of DFE circular 9/92, in either September 1993 or 1994, required all 1 Year (sec) PGCE courses to divide the 36 week course so that two-thirds of the time was spent in schools. This shift to a more school-based provision of teacher training has been retained, unchanged, in DfEE 4/98 and DfES 02/02. This means that the college-based part of a 1 Year (sec) PGCE course has to be delivered in 12 weeks. Prior to DFE 9/92 courses had varied in the distribution of school to college time but the majority had the balance of study concentrated in the HEI. Figure 8.1, over the page, shows the situation that existed in SMC in 1992-3.

Figure 8.1 – The changes required in the college’s PGCE programme to meet the requirements of DFE Circular 9/92



DfEE circular 10/97, High Status, High Standards: Requirements for courses of initial teacher training and DfEE circular 4/98, Requirements for Courses of Initial Teacher Training have increased the state’s prescription of what it is to be a teacher. Circular 4/98 presents a set of competences or “standards for the award of Qualified Teacher Status”. These have to be used as the criteria for the assessment of trainees at the end of their ITE course. Trainees need to be deemed as competent in all of these standards to be awarded Qualified Teacher Status. Annex H of circular 4/98 presents the Science curriculum for ITT. These documents help to define the professional qualities, *perceived by central government*, as necessary for newly qualified teachers. In this way the expectations of professionalism for new entrants to the teaching profession are assessed under the four main headers:

Knowledge and Understanding (of subject matter)
Planning, Teaching and Class Management
Monitoring, Assessment, Reporting and Accountability
Other Professional Requirements

Elliott and Calderhead (1993) point out that political decisions rather than educational research have been at the heart of changing the structure of ITT courses. These changes in the structure of training have influenced, or have redefined, the expectations for the professional development of a trainee:

while it might be argued that research on beginning teachers should provide the design of initial teacher education programmes (Floden and Klinzing, 1990), policy decisions tend to be shaped more by political forces than research initiatives

(Elliott and Calderhead, 1993, p.36)

Elliott and Calderhead (1993) express reservations over the increase in school-based time, implying that much more is needed than just increasing the amount of time spent in schools to ensure effective teacher development:

simply placing students in schools may not always result in students learning how to teach

(Elliott and Calderhead, 1993, p.36)

Here they are referring to the need for appropriate school experiences along with effective mentoring and time for reflective action.

Annex H of Circular 4/98 contains the Science curriculum for ITT. This contains a substantial amount of material to be covered in the relatively short PGCE course, hence the comment over the page:

Clearly there are problems in delivering all of this material
(Personal communication with Senior HMI, OFSTED, 2001)

A particular emphasis is the need to provide opportunities for trainees to improve aspects of their subject knowledge which are deemed, at entry to the PGCE course, as below the standard required. This has signalled another change in the professional training of new teachers as many PGCE courses never used to teach subject knowledge to their students (Eraut 1995). Subject method work invariably occurred in PGCE courses but often dealt with just the application of the subject and pedagogy of teaching rather than academic development of subject knowledge and understanding per se.

The provision for education in SEN, ICT, Citizenship, Moral, Spiritual and Social Development as well as National Tests in Literacy, Numeracy and ICT have had some impact too. They have reduced the time for main subject study and defined a wider territory for a secondary teacher's duties.

The introduction of Career Entry Profiles (1998) and the reintroduction of the probationary (induction) year, with a much clearer requirement upon schools to provide support for the newly qualified teacher have also influenced the state's expectation for the continual professional development of newly qualified teachers.

A summary of the major, politically driven, changes to PGCE courses, which have been introduced since September 1993 (first implementation of DFE 9/92), can be proposed. In the last decade politically driven changes to ITT have resulted in:

- (i) A reduction in the amount of time spent within the HEI whilst following the PGCE course (DFE Circular 9/92)
- (ii) The introduction of set of standards to assess the professional competence of beginning teachers (DfEE 4/98)

- (iii) An emphasis upon increasing the subject knowledge and understanding of the trainee (Annex H, DfEE Circular 4/98)
- (iv) The introduction of a Career Entry Profile (1998), the reintroduction of a probationary (induction) year with a requirement for employers to provide induction training to the NQT
- (v) The addition of specific courses in SEN and ICT, Citizenship, Moral, Spiritual and Social Development along with tests in numeracy (1999), literacy (2001), ICT (2002)

The combined effect of the above changes must have had a considerable influence on a trainee's interpretation of appropriate early professional development. Such rapid and recent changes in the nature and organisation of ITT suggest that substantial differences in mentors' and mentees', perceptions as to what constitutes the effective professional development of a trainee could exist. These differences would have arisen, at least in part, from the different ITT philosophies and courses as well as the school cultures into which each party has been socialised.

A comparison of historical, research informed, models for teacher professional development with those prescribed through recent changes in state legislation

Historical descriptions of the key features of a profession can usefully be compared to the aspects of professional development for trainee teachers.

Firstly, with respect to the *time frame* of professional development, traditional descriptions anticipate professional development occurring over a long time (Dreyfus, 1986; Berliner, 1989). The standards for the award of QTS in DfEE circular 4/98 are all required to be achieved within the 36 weeks of a full-time (sec) PGCE course. The induction year for the Newly Qualified Teacher and continuing professional development show that the state perceives teacher professional development as a long-term process. This means that the duration of the PGCE course is only the initial contribution to the longer time frame required for the professional development of teachers. Nevertheless, being the

first stage in the teacher's career it can be considered a very important aspect of professional development, which will influence a teacher's subsequent attitudes and behaviours (Handal and Lauvas, 1987).

Secondly, professional development can be examined with respect to *specialist knowledge*. Specialist knowledge includes both academic subject knowledge and educational knowledge such as educational theory. It also includes the protocols and procedures involved in the socialization into teaching. PGCE (sec) courses, prior to DfEE circular 4/98 often spent little time on academic subject knowledge (Eraut, 1994). The emphasis was upon educational knowledge acquired through courses on the application of subject to the target age-phase and aspects of pedagogy. However, Specialist Knowledge, according to the ITT National Curriculum for Science (Annex H of Circular 4/98), requires that a clear and significant emphasis in the development of academic subject knowledge is addressed during the ITT course. OFSTED inspections during 2000-2001 (personal discussion with senior HMI 2001) examined how ITT providers ensured that trainees' academic subject knowledge was being improved. This change in emphasis, towards academic subject knowledge, may be seen as a response to steer away from traditional PGCE courses. The state has viewed such courses as steeped in pedagogy along with the psychology and sociology of teaching. Consequently, due to state intervention, ITT courses have become more practical, more school-based and more centrally controlled. Another factor, which might explain the recent subject knowledge emphasis on ITT courses, could be that of a national teacher shortage in certain, secondary school, subject areas, such as Science, Maths, ICT and Modern Foreign Languages. In a climate of poor teacher recruitment candidates with poorer entry qualifications than would normally be expected are accepted onto courses. Candidates with degrees in subjects not normally accepted are also considered (e.g. Engineering for Physics, Environmental Science for Chemistry) as well as mature applicants who may have dated and faded knowledge of their specialist subject. The Teacher Training Agency for

2001-2002 has responded to this concern over the lack of specialist subject knowledge by the introduction of subject enhancement courses. PGCE trainees, in shortage subject areas, are able to enlist, voluntarily and free of charge, for additional courses to help develop their subject knowledge. Few could criticize the emphasis upon the development of academic subject knowledge in the current climate of poor recruitment and teacher shortage. The benefits would be passed on from the teacher to their pupils. However, in a PGCE course, which currently has only twelve weeks based in the HEI an increased emphasis upon academic knowledge rather than traditional educational knowledge does little to encourage prolonged and serious consideration of different learning styles and strategies. Current emphasis is on academic knowledge with a lot of practical, school-based teaching experience. This restricts time and thus trainees' perceived value for reflective practice and the development in understanding of learning theories and the rationale for different learning styles. School mentors and college tutors have less time and fewer opportunities to involve trainees in these reflective activities and such changes in practice will influence experienced teachers' expectations from an ITT course. Consequently, these changes in course structure and emphasis must have impact on trainees' understanding of mentoring and their expectations of mentor qualities. Such issues are explored within this thesis.

Thirdly, the *client-centered responsibility* of trainees and qualified teachers has become more important. Contemporary ITT courses and teachers' designated duties have increased in this professional quantity. Changes in the organization of schools, with their open-market, 'new right' management styles (Lunt, McKenzie and Powell, 1991) and the impact of the Education Reform Act 1988 along with the introduction in the 1990s of the Citizens' and Parents' Charters have forced schools to develop a more client-centered responsibility. Quality standards and awards such as BS5750 and Investors in People are now common place in educational establishments. These terms

were unheard of, in the education sector, ten years ago, even though many teachers would always have set the quality of pupil learning as utmost. It is the use of such terms and the requirement for making specific aspects of pupil performance more public that has changed. This increase in the public's expectation and the change to a more business orientated management style for schools, resulting from the introduction of the local management of schools (LMS), have established *client-centredness* as a much more overt and possibly important aspect of a teacher's professional responsibility than previously.

Fourthly and finally, the quality of *autonomy* and teacher professional development can be considered. In 1960 Eccles, as Minister of Education, described the teacher's classroom as a secret garden, where, behind the closed door, a private world of teaching was revealed to pupils. Perhaps this is an extreme example of teacher autonomy but many changes, again at state direction, have reduced the opportunity for teacher autonomy. Before the introduction of the National Curriculum in 1989 the content and organization of the school curriculum for pupils in Years 1-9 was essentially determined at school or individual teacher level, thus reflecting a high level of teacher autonomy in the control of content and delivery of subject matter. From Year 10 external exam syllabuses (GCSE, 'A' level etc.) provided the subject matter to be taught. For many years though the range of external exam syllabuses allowed schools and their pupils to pursue very varied content and styles of teaching, learning and assessment, which allowed for teacher choice and some autonomy. Indeed, during the 1960s and 70s there was much school-driven curriculum development and considerable teacher autonomy. The introduction of the Schools' Council, CSE mode 3 syllabuses and Nuffield Science schemes all encouraged greater teacher involvement in curriculum development (De Landsheere, 1988).

The recent, increasing state prescription over the organization of schools and their curriculum has had a massive effect on the reduction of teacher autonomy. It needs to be acknowledged that the National Curriculum has only

ever defined the content and assessment of the 5-16 curriculum, not the teaching and learning styles. In this respect teaching and learning styles are still allowed considerable teacher autonomy.

A requirement that school league tables of pupils' academic results are published, the growth and increased frequency of school inspections by OFSTED along with the increased public access to their reports have all constrained teacher autonomy. The morale of many established teachers, who were socialized into an earlier model of the teaching profession, has been damaged. I am not debating here the value of teacher autonomy. I am not advocating that the changes are right or wrong. I am saying that the changes in teacher autonomy have been profound and have had considerable influence on the nature of the profession. The scope for teacher freedom, previously a significant aspect of a teacher's job, has been replaced by regular scrutiny and increased public accountability towards an ever more tightly prescribed curriculum. Changes in teacher autonomy represent another area where mentor opinions may conflict with those of their mentees. Some mentors may uphold notions of professional autonomy from an earlier era of teaching. These differences could create confusion or conflict for the trainee over the roles and responsibilities required by successful teachers in the twenty-first century.

Clearly, politically driven changes in the organization, management and accountability of schools, along with the initial teacher training National Curriculum have had a substantial influence on teacher professional development. A more business like organisation for the running of schools and a greater emphasis upon academic subject knowledge of trainees has occurred. Teacher autonomy has been drastically reduced by stricter measures of state control. The important issue here is whether these changes in teacher professional development have improved the quality of teaching and pupils' learning in schools. It could be argued that the current requirements imposed on the teaching profession are at odds with the locally relevant, nurturing, child-centered approaches encouraged by many educational researchers.

A PGCE course should provide appropriate teacher professional development for its trainees. Mentoring should provide the activities and medium for much of this initial teacher preparation. In the light of the investigations presented later in this report it will be interesting to compare trainee perceptions of appropriate professional development with those discussed above. The mentoring strategies used need also to be evaluated for their suitability in providing appropriate teacher professional development.

Mentoring

Anderson and Shannon (1988) offer a conceptualization of mentoring that is rooted in historical reference which, they argue, serves as a model for the design and implementation of teacher mentor programmes. They mention Homer's poem, "The Odyssey" which gives the first historical reference to Mentor. Mentor, with some help from the goddess, Athene, was employed by the Greek warrior, Odysseus, to care for his son, Telemachus, when Odysseus left home for the Trojan wars. Thus mentoring was, historically, *an intentional process of nurturing, providing insight, support and protection*.

Anderson and Shannon (1988) mention that mentoring for a professional career became a topic for research in the 1970s with the development of the Human Resources Development Movement (Business / Industrial focus).

Anderson and Shannon (1988) review a range of definitions but express reservations that published definitions are too vague, lack a conceptual framework and fail to emphasize sufficiently that:

- Mentoring is fundamentally a nurturing process
- Mentors must be role models to the protege
- Mentors must exhibit certain dispositions that help define the process

They suggest their definition of mentoring as involving:

- Teaching,
- Sponsoring, (kind of guarantor – protecting, supporting, promoting mentee)
- Encouraging,
- Counselling,
- Befriending with a focus on professional or personal development and taking place in an “ongoing caring relationship”

They define their conceptualization of mentoring as:

a nurturing process in which a more skilled or more experienced person, serving as a role model, teaches, sponsors, encourages, counsels and befriends a less-skilled or less-experienced person for the purpose of promoting the latter’s professional and/or personal development. Mentoring functions are carried out within the context of an ongoing, caring relationship between the mentor and the protégé

(Anderson, 1987, in Brooks, 1997, p.28)

Anderson and Shannon (1988) were writing 4 years before Kenneth Clarke’s (Secretary of State for Education) North of England Speech (4/1/92) proposing the introduction of school-based ITT. The datedness shows, especially, by a lack of mention of assessment roles for mentors. The introduction of an assessment role could be seen as somewhat ‘at odds’ with the otherwise ‘warm’, nurturing definition that they offer.

There are also issues that the close relationship of nurturing could be ‘too close’ and prevent objective / open comment from some mentors. The combination of the mentor roles of care and protection with assessment cause problems for some mentors.

In the OU Professional Development Programme – Mentoring in Primary/Secondary schools (1994) mentoring is seen, very much, as an institutional commitment, with notions of the ‘mentoring school’.

Mentoring is defined as involving:

- Teaching
- Assessing (not mentioned by Anderson and Shannon, 1988)
- Supporting or counselling
- Managing

Primary and secondary schools are, however, often quite culturally different and some of these differences may be related to the size of the institution. Primary schools are generally much smaller than secondary schools. Institutional size can have a considerable influence on the embodiment of mentoring within the whole school’s philosophy and ethos. Issues of closeness and difficulties in nurturing and assessing may well be more problematic in smaller institutions. Indeed a tension between the openness needed to establish a supportive or counselling role and the objectivity required in undertaking trainee assessment exists. In a small institution trainees are restricted in their access to experienced teachers, they may only have one teacher, the Subject Mentor to work with. In larger institutions besides the Subject Mentor there will be a number of other specialist subject teachers providing a range of teaching and professional mentoring for the trainee. Thus the tension of protected nurturing with objective assessment is more likely to be problematic in smaller, typically primary, schools. A number of secondary schools have some departments involved in ITT whilst others have no, or infrequent, involvement – indeed in some large secondary Science departments individual members of staff can choose whether or not they become involved in ITT. A few headteachers in SMC’s school-partnership area have declared their schools as, “student-free zones” and do not undertake ITT.

Examining a range of educational material published between 1987 – 1994 suggests mentoring definitions should include: teaching, sponsoring, encouraging, counselling, befriending, assessment, reflection, CV and job application support, identification of Continuing Professional Development (CPD) in their mentoring definitions. More recently Tomlinson (1995) states that:

the basic functions of mentoring are to actively assist student teachers with;

acquisition of awareness and strategies relevant to teaching;

engagement in teacher activity which deploys such strategies and awareness;

monitoring of these teaching *activities and their effects*;

adapting strategy and awareness in the light of *reflection* on such feedback.

(Tomlinson, 1995, p.20)

Tomlinson (1995) also adds that mentoring involves motivating the student teacher to harness their personal strengths.

Thus, active intervention by the mentor is presented along with the notion of reflective strategies to enlighten and empower the trainee towards greater ‘thinking autonomy’. Although not strongly stated ‘monitoring’ suggests a rather ‘soft’ assessment role for the mentor.

Hagger and McIntyre (1994a) provide a definition taken from an ITT team working in Leicester in the early 1990s. They suggest:

mentoring is a multi-faceted concept incorporating personal support and the rigorous notion of professional development leading to enhanced competence.

(Hagger and McIntyre, 1994a, p.144)

This text was written after the publication of DfE circular 9/92 and the introduction of a two-thirds school-based ITT, PGCE programme. In 1992 the Council for the Accreditation of Teacher Education (CATE) had established a student assessment framework involving twenty-seven competencies. Influenced probably by these changes in legislation Hagger and McIntyre (1994a) suggest a more rigorous or 'colder' notion for the competence-linked assessment of students.

Husbands in Brooks (1997) quotes Allsop (1994):

...ten years ago (i.e. 1984), who had even thought of using the term 'mentor', in a teacher education context? That is a short time in which to achieve coincidence in the conceptual understandings, institutional arrangements and forms of action which are contained within the term 'mentor'.

(Allsop, 1994 in Brooks, 1997, p.16)

The suggestion here is that there has been insufficient time for institutions to establish a shared meaning of mentoring. In effect, mentoring, *whatever that might mean to individuals*, has been rapidly introduced through a political drive for radical changes in ITT in England and Wales. The consequence of this is that the educational contextual meanings and the purposes of mentoring have had to *evolve subsequently* from the implemented 'mentoring' practices. When there is plenty of time available it is usual that theory precedes the implementation of new practice. However, the recent speed of educational change has been so rapid that revised educational practice has been implemented with little or no time for prior theoretical discussion e.g. GCSE's, 1986; National Curriculum, 1989; SATs, 1992, A/S levels 2000. As Pascall (1992) said, as chair of the National Curriculum Council:

Change and surprise are the name of the game for education in the '90s

(Pascall , 1992, p.8)

Later on in this thesis the reduction in time for teachers to think about the value of educational changes and its impact on teachers reflective actions is considered.

Husbands in Brooks (1997) says that despite the newness of mentoring and the variations of the meaning of the term, it may be appropriate to think of mentoring as an approach, an activity, which one undertakes when working with student teachers. He goes on to suggest that conceptualizing mentoring as a discrete process is supported by the literature which mainly devotes itself to models and strategies for undertaking mentoring.

Husbands (1997) defines mentoring as a complex, sophisticated and multi-faceted activity incorporating different strategies and requiring high-level skills:

A range of factors will influence the quality of student mentoring:

- training received (or lack of it).
- The mentoring model explicitly required or implicit in a particular partnership scheme.
- personal preference influenced by the mentor's own view of the role of a teacher.
- personal qualities and inter-personal skills of the mentor.
- the nature of the personal relationship which the mentor has formed with the student.
- values and commitments.
- the different stages in the course.
- the capacities and needs of the individual mentee.

- the desired learning outcomes associated with a particular activity.”

(Husbands in Brooks, 1997, p.31)

Roberts (2000) considers that the current concept of mentoring is erroneously associated with Homer’s poem, “The Odyssey” as given by Anderson and Shannon (1988). He considers that the first origin of the modern day mentor is to be found in, “Les Adventures de Telemaque, by Fenelon (1699) – three millennia after the publication of Homer’s poem. Roberts (2000) says that people hold different opinions over the meaning of the term mentor and of the processes involved in mentoring. He continues by saying that only by agreeing and sharing the same understanding of these terms can educators communicate effectively and make progress. From a phenomenological reading of literature, spanning 1978 – 1999 Roberts (2000) inductively establishes the essential aspects of mentoring as:

1. a process form
2. an active relationship
3. a helping process
4. a teaching-learning process
5. reflective practice
6. a career and personal development process
7. a formalised process
8. a role constructed by or for a mentor

(Roberts, 2000, p.151)

Here Roberts (2000) drawing on work, from outside the educational domain. He cites Caruso (1990) and mentions that mentoring is a helping process. This appears to be the first explicit mention of ‘help’ being provided through mentoring

It is evident from published work spanning 1988-2000 that changes have occurred in the definitions and understanding of mentoring for ITT purposes. These changes have surely been influenced (or steered) as much by the rapid political reforms of ITT (DFE, 9/92; CATE, 1992; DfEE, 10/97; TTA, 1997; DfEE, 4/98; DfES, 02/02) as they have by educationalists developing working practices and values for a shared meaning to the concept of mentoring. Indeed Roberts (2000) argues that much still needs to be done over the shared thinking and understanding of mentoring. He declares that until educationalists share the same meaning about what mentoring is the value of mentoring research will not be fully realised. Some of the significant features, from a variety of definitions of mentoring, are shown in table 8.1. These are arranged in chronological order, to demonstrate the evolution of a definition of mentoring:

Table 8.1. Definitions of mentoring in an ITT context, 1988-2000

Author	Date	Significant features that constitute a definition of mentoring (with comments).
Anderson and Shannon	1988	Mentoring involves a more skilled or experienced person serving as a role model for a less skilled or experienced person. This suggests an apprenticeship-style of practice. There is nothing said of the level, type or quality of skill(s) required by the mentor. A mentor teaches, sponsors, encourages, counsels and befriends. This is rooted in an historical, nurturing, definition of mentoring. Thus a 'warm' definition of mentoring, suggesting a one to one relationship which is free from assessment is provided.
The Open University Professional Development Programme	1994	Mentoring involves teaching, sponsoring, counselling, managing and assessment. The OU definition introduces assessment and is also a strong advocate for a whole school approach to

		mentoring, extending the definition beyond solely a one to one relationship.
Tomlinson	1995	Monitoring is specified, which indicates a ‘softer’ style of mentee assessment. Active intervention by the mentor and the use of reflective strategies are proposed to empower the mentee.
Hagger and McIntyre	1996	Mentoring is seen as multi-faceted, with personal support and involving a process of rigorous professional development to enhance the mentee’s competence. The CATE (1992) competence-based assessment of ITE trainees had been introduced and this seems to be reflected in the ‘harsher’ assessment component of mentoring.
Husbands (cited in Brooks, 1997)	1997	Mentoring is seen as a complex and sophisticated process, which needs high-level skills. This is the first mention of the need for high skill levels for mentors. The inclusion of skill-level in the definition may have been influenced by reports from early mentoring schemes, which were not allowed time for detailed planning, training and preparation, due to the rapidity of change in ITE during the mid 1990’s. It may also say something about the reluctance of schools and HEIs to operate in true and equal partnership and to relinquish the pre-9/92 models of an HEI directed ‘teaching practice culture’. It also indicates that high quality mentor training, or perhaps better as mentor <i>education</i> is likely to be a time (and money) consuming process.
Roberts	2000	A phenomenological interpretation of mentoring from literature published between 1978 – 1999 is provided. For the first time, in educational literature, ‘help’ is

		<p>proposed as a component of mentoring.</p> <p>Roberts disputes the association of the modern day mentor with Homer’s poem, “The Odyssey”.</p> <p>He notes that educators still hold different views over their definition and meaning of mentoring and points out that a shared understanding of mentoring is necessary to improve communication and the value gained from mentoring research.</p>
--	--	--

Summary

Mentoring is complex and involves a variety of activities as well as requiring a variety of skills from the mentor. This implies that the effective mentoring of trainees will only take place if mentors have the skills, experience and time to devote to their mentee. The empirical part of this study examines trainees’ perceptions of mentoring and explores the opinions held by trainees over the necessary qualities of mentors. In summary to this section, by condensing the key points from published material (1985–2000), a contemporary definition of mentoring could be described as involving mentors in activities such as:

- being a role model
- teaching
- encouraging
- befriending
- counselling
- managing
- active intervention / promoting reflection
- monitoring / assessment
- helping

In order to undertake these activities effectively mentors need to possess qualities, which involve:

- Managing difficult and multi-faceted issues
- Using high level skills
- Resolving conflict between a nurturing role and one of rigorous assessment
- Interpersonal relationships, on a one-to-one basis, but also at a collegial and institutional level
- Ideas which are understood and interpreted differently by people and institutions
- Deploying a collection of models and strategies both flexibly and selectively whilst being sensitive to the trainee's needs
- Constructing individualised training tailored to the needs of the trainee
- Creating and maintaining a dynamic process that promotes the progress of trainees whilst combining support and challenge.

Mentoring strategies

Mentoring strategies were one of the themes for investigation in this study and may be defined as the activities or processes through which mentoring occurs. This study focuses on those mentoring strategies related to the planning, teaching and evaluation of lessons, including the development of reflective practice. The mentoring strategies used to introduce a mentee to teaching are typically described as falling into three categories. In practice the emphasis and interpretation of these categories varies, being influenced by the mentoring model or paradigm, through which the ITT programme or mentor operates.

Although a few mentors favour a 'throw them in at the deep end' or 'baptism by fire' approach to beginning teaching the majority of educationalists support an incremental introduction to teaching, set within an encouraging and supportive environment. This mirrors the way they would introduce new learning to their pupils. The three key mentoring strategies are:

- (i) *Observation of experienced teachers / sharing of practice*

Here mentors talk about their own practice after being observed by a trainee. Early observation focuses on specific, lower-order skills and later on more sophisticated approaches.

(Open University Professional Development, 1994; Hagger and McIntyre, 1994b; SMC Observation of Teaching and Learning, 2000)

(ii) Collaborative teaching

Here the mentor and mentee jointly plan, teach and evaluate lessons, which support and protect the mentee through their early teaching. Collaborative teaching also allows the mentor-mentee relationship to develop more fully.

(Wilkin, 1992; Hagger and McIntyre, 1994b; Open University Professional Development, 1994; SMC Mentor Training Programme, 2000)

(iii) Solo teaching and co-analysis of practice

Here the mentor observes the mentee's lesson and analyses the lesson afterwards with the mentee. This is seen as a crucial part of formative assessment.

(Hagger and McIntyre, 1994b; Open University Professional Development, 1994; SMC Mentor Training Programme, 2000)

These strategies, supporting the gradual introduction to solo teaching, could be compared with those used in learning to drive a car, albeit that car-driving should be easier as it involves more specific, low-level skills than does teaching. The end result is similar, a blend of autonomous actions Tomlinson (1995) and 'expert' skills Berliner (1989) with conscious, anticipatory and reflective actions.

In the same way as learning to teach, learning to drive would normally follow an observational, co-driving (or dual control) and solo-driving sequence. The new driver would also be assessed by a competence-based test and, after a 'green plate' probationary period, aspire to expert driver status. A point that will be returned to later, in the context of developing teacher expertise, is the

considerable extent that the co-driving strategy plays in developing a person's driving capability. This will be contrasted with the *minimal contribution* of collaborative teaching in the PGCE courses.

The observation of an experienced teacher's lessons and the sharing of their practice seem a useful strategy to introduce to the trainee first but there are a few issues to consider. Hagger and McIntyre (1994b) say that student teachers need help in order to benefit from observation. They suggest five different classroom observational objectives:

- (i) learning to see from the teacher's perspective
- (ii) learning a language for talking about teaching
- (iii) learning about standards teachers set
- (iv) finding out different ways of doing things
- (v) giving access to experienced teachers' craft knowledge.

The notion that focussed observation is needed seems appropriate. Popper (1963, p.84) makes reference to this, "...clearly unfocussed observation is absurd". Berliner's (1989) novice teacher would also need guiding as to what to look for in a lesson. SMC uses a booklet to focus student observation, "Observing Teaching and Learning". A draw-back of targeting trainees to observational tasks is that a few trainees can become so involved in the process of noting down their observations that they fail to integrate into classroom activities when such opportunities arise e.g. pupil written work, group work, practical work etc. They remain an outsider to teaching and miss-out on early, protected, classroom-integration opportunities.

Sharing of practice could reasonably be expected to be at its best when discussion of the lesson before as well as after its presentation takes place. Pre-lesson discussion would allow the mentor to orientate the trainee to key aspects for observation as well as explaining the desired learning outcomes and setting the context of the learning. Post-lesson discussion would enable the

mentor to ‘unpack’ their perceptions of the lesson, to undertake a reflective analysis of the lesson and help guide the trainee to the significant issues of that lesson as novices may not ‘see’ how experts operate (Berliner 1989).

From work with mentors in the SMC PGCE programme *time pressures* on teachers prevent a lot of pre-lesson discussion as they do, though to a lesser extent, with effective post-observational discussion. Teachers are generally happy for trainees to watch their lessons but appear to have little time to discuss key issues from the observed lessons. Lack of time must restrict the effectiveness of this strategy as novices cannot be guided by the expert teacher to see how they manage their teaching.

Collaborative teaching

Wilkin in Tresman and Edwards (1993) comments on collaborative mentoring strategies taken from the Oxford Internship ITE training scheme (used in the early 1990s as evidence to support successful school-based ITE programmes) where the notions had been borrowed from medical school training. The aims of collaborative teaching were that it should highlight the status of the trainee teacher and help to emphasize the ITT/school partnership.

Collaborative teaching involves working with trainees at all stages: planning, teaching and evaluating. At the beginning it allows trainees to focus on particular aspects in a supported environment. Later trainees may try out complex teaching and learning strategies with an experienced colleague. Collaborative teaching should ensure that pupils have appropriate support whilst a trainee is developing their teaching capability. Collaborative teaching can provide *benefits for trainees by:*

- learning to plan, making the mentor’s plans more explicit; showing how a teacher ‘fleshes-out’ plans etc.
- learning teaching skills through responsibility for a part of a lesson. This removes some of the class control fears and allows concentration on specific skills thus enabling the trainee to gain in confidence.

- gaining access to teacher's craft knowledge

and benefits for pupils by:

- more lively, dual, presentation
- smooth management of resources
- more individual attention and setting of differentiated tasks.

Hagger and McIntyre (1994b) cover similar issues on collaborative teaching, describing the strategy as the opposite of 'throwing in at the deep end'.

There are sometimes problems in developing the mentor-mentee relationship as some mentors could find the relationship threatening (some mature trainees are very self-confident and can undermine the confidence of their, often younger, mentors). Pupils, not being used to collaborative teaching, are unsure as to who is 'in-charge' in the lesson. In theory, more collaborative teaching could help reduce the often-mentioned concern (expressed by senior school staff on behalf of parent opinion) that too many lessons are being taught by trainee teachers in schools.

In SMC Science Mentor Training Days most Subject Mentors agree that a gradual, incremental style of learning, set in a supportive learning environment, is more suitable than, 'throwing in at the deep end'. I then put to these mentors the case for collaborative teaching in the PGCE course as there is little evidence of collaborative teaching occurring (Burrill, 1995, 1997). Missing out on collaborative teaching can be likened to a novice driver, after having observed an experienced driver, being expected to miss out the co-driving phase and progress immediately to solo driving. Such a strategy would be considered unsuitable for a trainee driver both in terms of their progress and confidence. In a similar way the omission of some collaborative teaching would seem to have detrimental effects of the teaching progress, confidence and self-esteem of the trainee.

Collaborative teaching, in Science, is rarely used (my observations from ten years of ITT training and ten years ITT work in secondary schools) even though mentors in College Mentor Training Days agree with the rationale. *Time pressures* on teachers, to jointly plan and debrief a lesson, are cited by mentors as the main reason for the lack of collaborative teaching. Collaborative teaching is also something rarely, if ever done by qualified teachers and thus may not be seen as a useful strategy for full-time or 'proper' teaching. Collaborative teaching also involves formal planning and reflection which experts rarely do (Berliner, 1989). Collaborative teaching, due to the time needed to undertake this, introduces organisational conflict for the mentor as it involves the mentor setting mentee training in direct competition with their pupil teaching duties.

Collaborative teaching appears to have potential for the development of the professional mentor-mentee relationship but for some mentors the relationship that would develop could become 'too close' and this could cause problems in the objective assessment of trainees (Jacques 1992).

Solo teaching and co-analysis of practice

The Open University Professional Development Programme (1994) proposes a structure for the mentoring strategy of solo teaching and co-analysis of practice, which involves:

- formative assessment and self-evaluation : mentor collects evidence from observing trainee and uses this in discussion with trainee. The evidence is used to guide the student to the next stage of training.
- Supporting the trainees in analysing their own practice: trainees involved in planning the co-analysis. Trainees also collect evidence for co-analysis discussion.
- Constructive feedback on strengths and weaknesses: trainees analyse lesson first. Mentor rigorous but non-judgmental. Important to focus on successful elements as well as weaknesses.

- Helping the trainee to carry out action planning
- Changing the focus as trainee practice develops; helping the trainee to go beyond minimum competence levels..

In the SMC, PGCE programme solo teaching and co-analysis of practice are the most commonly used strategies. Teaching practice begins in October and ends the following June. Mentor qualities and enthusiasm for ITT work are of key value here – in ensuring that mentee’s lessons are discussed and co-analysed in a supportive and helpful manner. In some schools trainees (often the ‘capable’ ones) are left to ‘get on with it’ and the ‘secret garden’ of teaching flourishes. Some trainees have complained over the lack of formal and considered discussion about their teaching with experienced teachers – an aspect highly valued by trainees in my research from 1995 and 1997. A few trainees talk of rarely being given a ‘free lead’ in lessons as the usual teacher (encouraged by teacher conscientiousness, anxiety, or Health and Safety legislation) is nearly always present in their lessons.

The Open University course E271 (1991) suggests that many teachers have little or very shaky knowledge of learning theories and that ad hoc lesson preparation is typical. If this is the case how can such teachers help trainees? Additionally many experienced teachers are not formally aware of reflective teaching practices and do not use them systematically or reliably in their own practice (OU, E271 1991; OU ES821 1994 and college mentor training days 1999-2001). Mentor education is needed here in order that trainees can be better supported by reflective techniques.

Qualities needed by mentors

Earlier in this chapter a contemporary view of mentoring was presented where Hagger and McIntyre (1994a) and Husbands in Brooks (1997) described mentoring as being multi-faceted, complex and sophisticated and involving high level skills.

It therefore seems reasonable to only expect high quality mentoring provision from high quality mentors. The ‘human factor’, namely the nature and enthusiasm of the mentor, will be of paramount importance in ensuring mentoring models and strategies are employed to the mentee’s best advantage. No matter how good the mentoring documentation and underpinning philosophies are the value of these for the mentee will only be fully appreciated if the mentor possesses and uses specific qualities. A comparison of published mentor qualities and trainees’ experiences and evaluations of these takes place in the results and their analyses and discussion chapters.

Hagger and McIntyre (1994a) make useful comment on mentor qualities:

...mentoring, like teaching, can only be a successful activity if those who are engaged in it are deeply committed to it and confident of its value and feasibility.”

(Hagger and McIntyre ,1994a, p.163)

They propose conditions for the shaping of mentor roles, which are that mentors need:

- to be working in partnership with university staff who,
 - are enthusiastic about the move towards school-based teacher education
 - recognize mentors as equal partners in ITE
 - offer tentative negotiable plans for teacher education curricula
- more time.
- established positions within well-structured and clearly recognized whole-school frameworks.
- support to explore different aspects of their roles.

I would add that many mentors need education and training, for example, to explore concepts of mentoring and to develop reflective practices.

Jacques (1992) reported on a study of 35 mentors in an Articled Teacher Scheme (ATS) in 1990-92. Although these findings are dated Jacques (1992) notes several points that remain relevant to mentors involved in ITT. Jacques (1992) noted the following tensions from mentors in their mentoring roles. Mentors were:

- not prepared for the time involved in the ATS.
- not used to inducting adults into a new work role.
- surprised by the tensions generated in school (especially when an articled teacher was unsuccessful).
- not aware or confident of reflective teaching strategies and how to use them.
- having difficulty with assessment of articled teachers when a close and mutually supportive relationship had developed.
- not willing to identify weak students due to a sense of personal failure.
- least satisfied with a strictly competence-based mentoring

Again these findings suggest that appropriate mentor training is vital as time is needed for teachers to consider and develop their knowledge and skills needed for effective mentoring. Mentors need to share their own teaching and mentoring experiences. They need to think about the various and different needs of trainees. They need to learn and be able to select suitable teaching strategies to promote effective adult learning. Clearly, there is insufficient time, opportunity to think or to share collectively their thoughts whilst teachers are based in school (Hagger and McIntyre, 1994a). To really promote the knowledge and skill of mentors would appear to need a lot of time. Currently the college offers a three-day mentor training course for new mentors with a one-day a year 'top-up' course for experienced mentors. These courses can only briefly touch upon the knowledge and skills of mentors and the various needs of trainees as the administrative aspects of an ITT course have centre

stage. Consequently, there seems to be a shortfall created by a lack of time, for the effective education of mentors.

Mentoring Models with emphasis on reflective practice

This section begins by presenting skill cycles and skill development models. These models will be seen as closely related to the skill-based or competence-based nature of current assessment requirements for ITT (Standards for the Award of Qualified Teacher Status, DfEE 4/98 and DfES 02/02).

Some of the strengths and weaknesses of skill-based models will be discussed with respect to the professional development of a teacher. A discussion of reflective practice follows. The term reflective practitioner (Schon, 1983) has been widely used in education for almost twenty years. It embodies aspects of Hoyle's professional autonomy (Hoyle and John, 1995) where individuals analyse and reorganise their professional duties. It may be related to taking ownership of teaching within a climate of state-driven curricula (Calderhead and Gates, 1993). Reflection is now seen as an essential part of a teacher's work by the Teacher Training Agency in Standard 1.7 of Professional Values and Practice. Trainees are required to be:

able to improve their own teaching, by evaluating it, learning
from the effective practice of others and from evidence

(DfES, 2002, p.6)

This appears to represent a return to valuing the reflective practitioner as this 'standard' was not present in the previous standards for the award of QTS (DfEE circular 4/98).

Considerations of wider-ranging or multi-focused mentoring models are presented. These are derivatives of the apprenticeship, competence and

reflective mentoring models presented by Maynard and Furlong (1993). The section ends by proposing that the use of a mixed-model approach is likely to be the most effective way of educating a trainee teacher.

Skill cycles and skill development

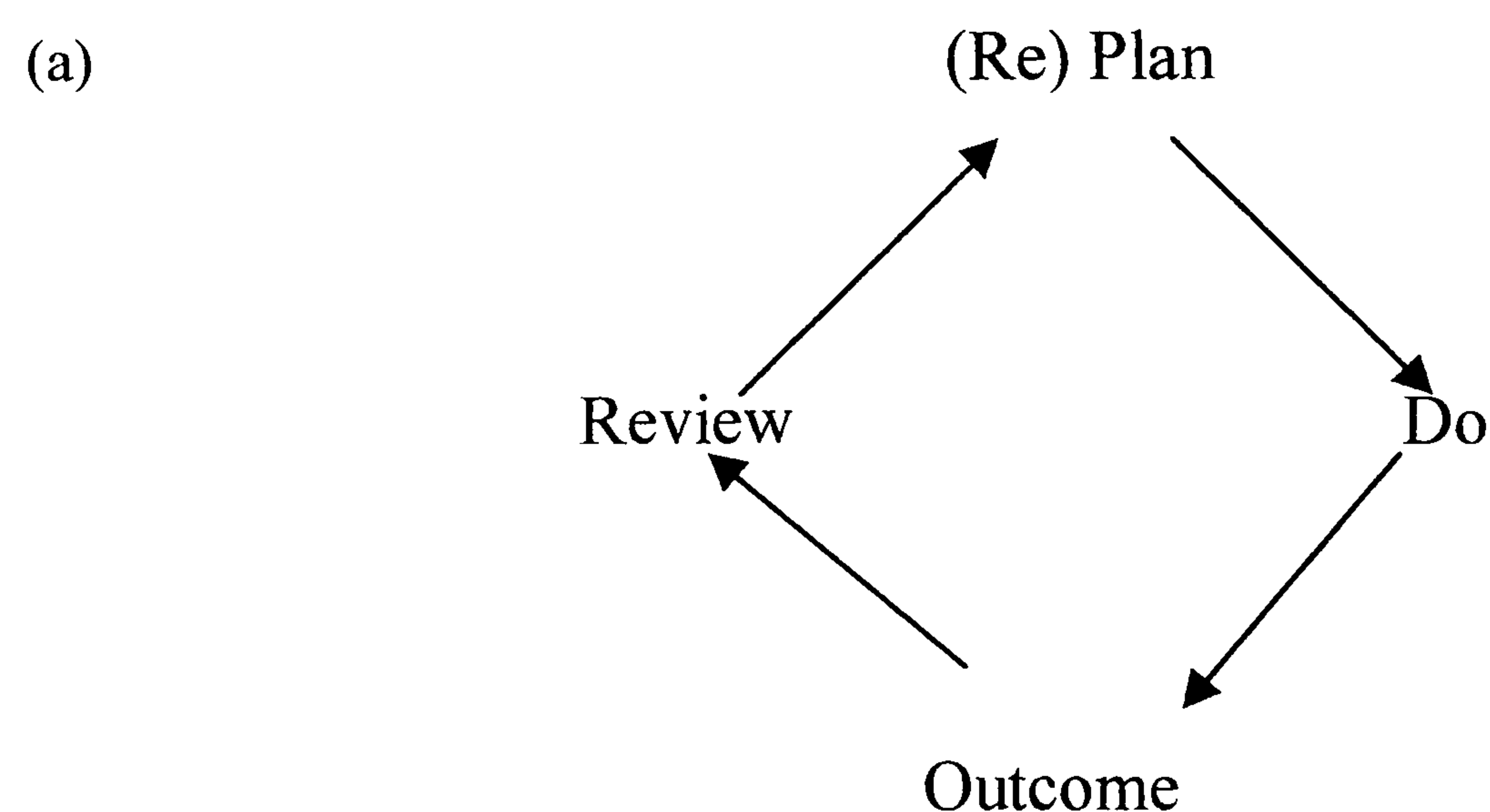
If one accepts that skills need to be acquired for effective teaching then ITT and the development of the skilful teacher ought to be usefully informed by theories of skill development. A question to be returned to later is whether teacher '*training*', based on models of skill learning, is sufficient for the development of *professionally educated teachers*. This aspect is considered with respect to trainees' perceptions of appropriate professional development in ITT.

General models of skill development generally involve the stages of:

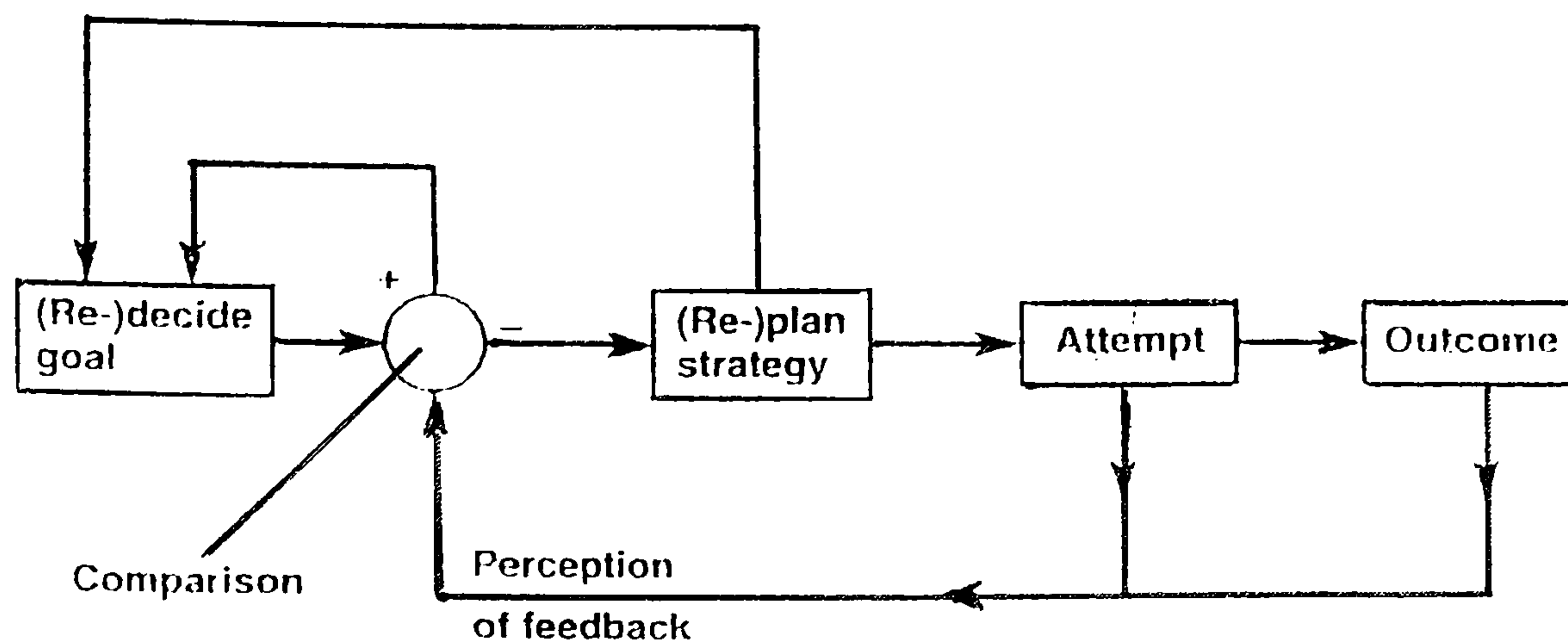
Plan – Do – Outcome – Review – Re-plan

that are interpretations of work on experiential learning (Kolb, 1984). Figure 8.2 provides two examples of such 'skill cycles'.

Figure 8.2. Examples of Skill Development Cycles



(b)



Tomlinson (1995) refers to learners typically going through three phases in the development of skills:

- (i) *cognitive phase* – the earliest stage of trying to, ‘get it all together’. This is a mix of new information, previous experiences, planning, early activity. Understanding is limited by the capacity of the human mind to organize and make sense of the large amount of information.
- (ii) *associative phase* – with repeated performance and a review – reflection - re-planning approach the learner tends to find that things ‘come together’. Processes become easier and more intuitive.
- (iii) *autonomous phase* – the whole action can be undertaken consistently and fluently. As the processes become more automated there is the problem that future reflection and modification could stop, restricting flexibility and awareness of the need for change.

Thus the learner begins with a feeling of insecurity, overwhelmed by information, which doesn't make clear sense to them. They pass through a stage of familiarity in which, confidence, clearer vision and perceived success occurs (the competent stage) and they (may) eventually enter a stage where the skills are demonstrated fluidly, coherently and in an automatic fashion.

The Dreyfus twins (1986), working in North America, proposed a theory of skill development related to the previous three-phase model. They suggested the following five stages of skill acquisition, labelling them:

- (i) novice
- (ii) advanced beginner
- (iii) competent
- (iv) proficient
- (v) expert

It would appear that these stages had been influenced by the work of Benner (1984) in his essay, “From Novice to Expert”. Novices were seen to do everything by virtue of conscious, general rules operated in an analytical, rational way. The Dreyfus approach sees a novice of having no capacity to, “judge salience” i.e. the importance of features. Novices are operating in the cognitive phase, Tomlinson (1995). Experts were seen to do everything intuitively, tacitly and holistically (Tomlinson’s, 1985, autonomous phase). A key point, in the development of teacher expertise, is surely the desire to achieve expert status with the retention of a conscious awareness and reflective approach. This notion of the *thinking* expert conflicts with the autonomous expert presented in the literature of Dreyfus (1986) and Berliner (1989).

The limitations in this model of skill development (competence acquisition) may partly reflect the North American tradition for procedural prescription. The notion that those new to the profession (of teaching) have to begin by being given rules to follow blindly is a weakness. Firstly, it is inappropriate for all students to be assumed to be at the ‘novice’ stage, in all aspects of their training, at the start of a PGCE course. The PGCE trainee cohort indicates a mature trainee population (mean age of 25-28 years in Science between 1995-2002) with several entrants in their 30s. Thus a number of trainees begin their teaching with skill expertise developed in other walks of life. Some skills are

likely to be generic and transferable to the context of teaching e.g. presentational, time-management, inter-personal and communication skills. Additionally, there will be some teaching-specific skills such as subject knowledge, teaching and learning strategies suitable for young people that mature entrants are unlikely to have acquired.

Secondly, the five-point scale of Dreyfus (1986) proposes an incremental hierarchy of skill development but progression to expert level also involves a *qualitative change* in cognitive operation. The trainee has to cognitively change from recipe-driven, rule-following novice behaviour to the intuitive, tacit and holistic behaviour of an expert. I would argue that, for many trainees, this requires a mental operational shift which takes more than 36 weeks (the duration of the PGCE course) to be achieved. It would also seem reasonable to propose that some 'experienced teachers' will be unable to operate reliably, in the Dreyfus (1986) 'expert' category, for some aspects of their work.

Thirdly, the Dreyfus (1986) operational context of 'novice' teaching could, in some circumstances, be undesirable. The nature of the inter-personal, socio-behavioural world of teaching mean that a blind, rule-following, 'novice' who can't see the importance of underlying issues, could be problematic in the classroom.

Berliner (1989) developed the ideas of Benner (1984) in the context of teacher expertise. He said experts in a variety of fields show similarities but have only scanty knowledge on how they progress from being a novice. Important qualitative differences exist in the thinking and performance of novices and experts and those in between. This suggests that Berliner (1989) would support a case for mentors to act in a social constructivist manner to enhance trainees' development. As Tomlinson (1995) says, active, reflective mentor intervention is needed. Some novices have trouble interpreting (reflecting on) events, whilst experts show effortless and fluid performance and rarely, unless a problem arises, become reflective. There are issues here in the progression of the trainee from novice to expert level. The transition between stages is not

a gradualistic continuum but one punctuated by qualitatively different stages that requires the acquisition of different skills or behaviours. There are also issues for a mentor in demonstrating expert teacher skills to a trainee. Not only does the mentor need to be able to operate at an expert level, which Berliner (1989) casts some doubt over (see below), they also need to be able to ‘unpack’ the components of an expert skill in order that a trainee can see and learn about this aspect of teaching.

Berliner (1989) established a five-point scale, identical to that of Dreyfus (1986), accepting *that some teachers may never progress to expert in all aspects of their teaching and that it could take several years to establish teacher expertise.*

Berliner’s 5 point scale for the development of teacher expertise

- (i) *Novice* – Use/need rules unrelated to context. Real world experiences more important than verbal information (want action not words).
- (ii) *Advanced beginner* – strategic knowledge built up and know when to break rules. Context begins to guide behaviour. Not actively determining (in control) of what is happening
- (iii) *Competent* – More personally in control. Make conscious choices, set priorities and decide on plans. Set priorities and decide plans. Emotional about success and failure but not very fast, fluid or flexible in their behaviour.
- (iv) *Proficient* – Intuition and know-how become prominent – but still analytic and deliberative in deciding what to do.
- (v) *Expert* – often arational (not irrational). When things go smoothly experts rarely appear to be reflective. When things don’t work out they bring deliberate, analytic processes to bear.

(condensed from Berliner, 1989, pp.5-8)

A six-point scale in the development of ITT was introduced in SMC as part of a 'Tracking Document' (TD) or 'Formative Targets Document' (FTD) to record evidence of a student's 'success' in achieving, "Standards for the Award of Qualified Teacher Status". This scale was developed by the Modern Foreign Languages department in SMC from their own work (1995-97) and informed by that of Frost and Jennings working at Leeds University in 1995. The origins of skill development, although not acknowledged, appear to lie in the works of Benner (1984), Dreyfus (1986) and Berliner (1989).

At the end of a PGCE course trainees rated as being at least in the competent stage, for all of the "standards", pass the course. This leaves the proficient and expert classes unachieved by some trainees for some of the standards. As Berliner (1989) anticipated, not only could the acquisition of expert status take several years, not all teachers would achieve expert status in every aspect of their work. This raises issues about the suitability of this assessment scale and the motivation of trainees on an ITT course. A declaration of competent, but not proficient or expert, at the end of their PGCE course seems to offer little reward or encouragement to newly trained teachers. A lack of time and the nature of such skill development scales for use in ITT are the main problems. Time frame and course requirement features place reservations over the appropriateness of such a skill development model and the motivation offered to new teachers in a 36 week PGCE course. However, the skill development stage model does enable progress to be acknowledged and, possibly more importantly, can be used to judge competence in achieving the standards for the award of QTS, required by current legislation (DfEE 4/98; DfES 02/02).

Tomlinson's (1995) model for effective mentoring accepts the importance of a skill cycle (but not necessarily a hierarchy of skill development) assisted by a coach or mentor. A key point made by Tomlinson (1995) is that learners need to be assisted in their learning. He refers to Vygotsky's work on social constructivism saying that the learner will need other people to assist learning by making it meaningful. Tomlinson (1995) proposes that the, 'promoter of

learning' would work with the learner on the basic skill cycle. He accepts that the effectiveness of the assistance will depend on the sensitivity and skill of the individual as well as their ability to take into account the learner's 'theory' of skill. Tomlinson (1995) is advocating a reflective dialogue between mentor and mentee, which is a cornerstone for the reflective models to be presented in the following section.

Maynard and Furlong (1993) quote Fuller and Brown (1975) over trainee concerns and stages of development in teaching. They suggest that the development of teacher expertise can be impaired by the concerns trainees have early on in their teaching careers. They mention:

- trainees show early idealism, they are idealistic towards pupils and unsympathetic to class teacher
- classroom survival, trainees find difficulty in seeing (picking out the signal from the noise) key aspects from classroom observation
- recognizing difficulties, trainees are sensitive to varied demands; they are over-concerned with their own assessment
- hitting the plateau, when basic management and control are achieved trainees relax and still focus on themselves and not the needs of their pupils
- moving on, show concern for pupils' learning, but there is a greater need for positive intervention

Fuller and Brown's (1975) data is over 25 years old and was taken from undergraduate teacher trainees who were probably in their late teens to very early 20s. The college's PGCE trainee ages range from 21-48 years (1995-2000). Assessment about progress in teaching is a much more frequently and importantly monitored aspect nowadays (DfEE, 4/98; DfES, 02/02), thus expectedly of more concern to trainees. Plateauing and moving-on remain issues of concern, arguably of greater concern following the introduction of

competence-based assessment and the increased emphasis on 'Professional Values and Practice' in circular DfES 02/02.

What is Reflective Practice and why is this perceived as valuable for professionals?

As professionals we have the responsibility to look beyond or behind the routine implementation of knowledge. We must continually review our daily activities with a commitment to improving our practice.

(Lewis and Dowling, 1992, p.7)

Reflection is considered generally to be an appropriate and good quality in the work of teachers with terminology such as " reflective teaching ", " reflective practitioner ", " reflective diary ", " teacher as researcher ", " action research " being commonly used. Although much of the current work in education stems from Schon (1983) and is informed by Kolb's (1984) work on experiential learning and work in adult learning earlier evidence indicates professional thinking informing action. John Dewey (1933) cited in OU course ES821 (1994) contrasted action based upon reflection with action that is impulsive or blind. He also recognised the need to develop specific attitudes of open-mindedness and skills of thinking and reasoning in order to be able to analyse situations.

A variety of models will be used to show the activities and processes of reflection. Soper (1992), an enthusiastic advocate of reflection, describes an important purpose of reflective practice to both teachers and learners:

As teachers we are responsible for creating space in our classrooms, space in our heads to walk around an idea and look at it from various perspectives. Such walking around is what

reflective practice is all about for both teacher and learning adult.

(Soper, 1992, p.27)

Calderhead and Gates (1993) suggest that the current interest and enthusiasm for reflection may be more personally and politically driven than "good professional practice" driven. They note the organisational changes in Western countries towards an increasing centralization in the control of education. They report on the increasing portrayal of teachers as technicians who deliver the curriculum. They continue by explaining that the current enthusiasm for reflection lies in terms of the personal empowerment, autonomy, critical analysis and choice it provides to the individual teacher in the more accountable teaching world of the '90s. Perhaps reflection offers opportunities to escape the routine of the curriculum and its delivery, to realise that the teacher still has personal value and capability to, at least, fine-tune the teaching and learning of pupils. Even though reflective practice can create such opportunities reflective practice is very much concerned with helping individuals think about educational issues and make critically informed decisions that inform their educational actions.

Calderhead and Gates (1993) presented aims, collected from a variety of ITT courses, which embodied the reflective philosophy and therefore have relevance to this study. They suggested that reflective teaching should:

- (i) enable teachers to analyse, discuss, evaluate and change their own practice, adopting an analytical approach.
- (ii) foster teachers' appreciation of the social and political contexts in which they work, helping teachers to recognize that teaching is socially and politically situated and that the teacher's task involves an appreciation and analysis of that context.

(iii) enable teachers' to appraise the moral and ethical issues implicit in classroom practices, including the critical examination of their own beliefs about good teaching.

(iv) encourage teachers to take greater responsibility for their own professional growth and to acquire some degree of professional autonomy.

(v) facilitate teachers' development of their own theories of educational practice, understanding and developing a principled basis for their own classroom work.

(vi) empower teachers so that they may better influence future directions in education and take a more active role in educational decision-making.

(Calderhead and Gates, 1993, p.2)

Calderhead and Gates's (1993) criteria for reflective practice are prefixed by enable, foster, encourage, facilitate and empower. This conveys the notion that reflective practice should educate a trainee to be a critical thinking and analytical teacher who is supported to develop teacher autonomy. This nature of reflective practice contrasts markedly in style and purpose with Berliner's (1989) descriptors for the development of skilled behaviour mentioned earlier. the perception of trainees for their appropriate professional development and reflective practice in ITT will be considered in this research.

Reflective Practice

The processes involved in reflection are often presented as three subdivisions as described by Schon (1983, 1987):

- A. Knowing - in – action
- B. Reflection - in - action
- C. Reflection-on-action

These represent qualitatively different types of reflection. However, a reflective activity could involve the interaction of these different levels of reflection. A description of the characteristics of each of these types of reflection follows.

A. Knowing - in - action

Schon (1987) describes the workaday life of a professional as dependent upon tacit "knowledge - in - action", this being described by Calderhead and Gates (1993) as "skilled behaviour". In a biological sense such actions might be considered as conditioned reflexes i.e. automatic, learned responses which are initiated by a specific stimulus following exposure to a conditioning (learning) programme. Schon (1987) says :

Knowing - in - action is tacit, spontaneously delivered without conscious deliberation; and it works, yielding intended outcomes so long as the situation falls within the boundaries of what we have learned to treat as normal.

(Schon, 1987, p.28)

Thus these are the sort of actions that comprise the repertoire of "on - the - spot" teaching responses. These skilled behaviours are what many experienced professionals demonstrate and the behaviours exhibited exist due to their years of experience - or exposure to appropriate conditioning processes. For many of our mentors and students this reflexive behaviour is a vital, desired and respected commodity. It seems analogous to the professional "stand-up" comedian or sports-person who, through instinctive responses, make their actions seem well-timed, graceful and easy. One of the most frequent mentor

comments made about our PGCE trainees is, "he/she, through experience or further practice, will learn the tricks of the trade". "Tricks of the trade" being those teacher-valued commodities of a stock of appropriate knowing - in - action strategies. In terms of trainee classroom survival a kit of core reflexive behaviours are very useful and are acquired through exposure to teaching. These knowing – in – action responses remain as subconscious actions and may not be associated with higher level, conscious reflection. They remain as "tricks of the trade" which can be learned per se and do not necessarily require understanding. Knowing - in – action responses have the benefit of providing quick remedial actions, faster than those that could be generated through conscious reflective practices.

B. Reflection - in - action

Schon's (1983) work, "The Reflective Practitioner" introduced the notion of reflection - in - action through its application in such professions as architecture, engineering, town planning and psychiatry. The concept was later expanded upon, in the light of public debate in Schon's second book on the subject, "Educating the Reflective Practitioner" (1987). The appropriateness of his work for school teaching will be discussed in a later chapter. Mackinnon (1987) worked with pre-service teachers in Canada and attempted to determine whether Schon's (1983) "reflection-in-action" was :

applicable and appropriate to studying the way in which
methods students make sense of their teaching performances.

(Mackinnon, 1987, p.44)

Mackinnon describes Schon's (1983) model of reflection-in-action as the practitioner engaging in :

... a reflective conversation with the practice situation. Past
experiences are brought to bear on the situation; frames are

imposed and bring to attention certain aspects of phenomena; problems are set and actions that entail certain solutions are formulated. What the practitioner 'sees' in the situation depends fundamentally on his or her conceptual repertoire and on the way in which the reflection proceeds.

(Mackinnon, 1987, pp.47-48)

Reflection-in-action may be considered, for ITT purposes to involve three phases. Firstly significant issues in teaching are identified. Mackinnon (1987) called this the *initial problem setting* phase.

An 'initial problem' will have been identified during a trainee's lesson. This problem will usually be shaped and somewhat re-defined by the end of the cycle, hence the qualifier 'initial problem'. Examples have included gaining class attention at the start of a lesson - voice, manner, timing ; question-answer strategies ; knowledge and use of pupil names. During this phase the problematic issue is articulated by the mentor with conclusions and implications for future lessons being made. In this way the mentor aims to frame the initial problem for the trainee. From my experience of working with trainee teachers and to their reactions in reflective discussion (Burrill, 1995, 1997) it is important to reflect on positive issues as well as on problematic ones. Not only does this allow trainees to learn more by considering their successes as well as their failures it also helps to build the self-esteem of the trainee. This, an emphasis on the reflection of *significant issues* is more valuable than a concern with just *problematic issues*. Self-esteem of trainees can easily be lowered whilst following an ITT course.

In the second, *reframing* phase the problematic phenomenon is re-examined from different perspectives. This activity may well occur several times. For example if the problem framed was concerned with the use of the trainee's voice, a mentor could encourage the trainee to consider the issue from the pupils' viewpoint. A lesson observation comment might read, "Your voice

tended to be too quiet, lacked authority and modulation". The trainee might have been unaware of this, being wholly concerned with the subject knowledge to be delivered in a logical and accurate fashion - indeed they may have been reading directly from their lesson notes. A mentor could then present what the pupils' received i.e. a message which, although accurate, was put over in a timid, uninteresting manner that failed to be understood by all pupils. The mentor might say to the student, "could this mean that the pupils saw you as an unsure (quiet voice) teacher who put over incomprehensible material (they didn't understand it) in a boring fashion (lack of modulation)?" The result of the reframing process is to develop a deeper understanding of the problematic phenomenon, based on the insights derived from the alternative theoretical viewpoints presented to examine it.

The final phase or *resolve* is the product of the work done in the second, reframing phase. A new conclusion about the problematic phenomenon is formulated and a new implication is often derived. A mentor, acting in a social constructivist style could help the trainee to clarify their own meaning and understanding of specific issues by accepting an observer's different opinion. The trainee could be encouraged to challenge and refine their own understanding, with the aim of improving their subsequent teaching performance. Mackinnon's (1987) interpretation of Schon's (1983) reflection - in - action requires conscious deliberation between the mentor and mentee *after* a lesson has been taught. The reflective process is consequently time-delayed and the outcome can not be used in the lesson concerned.

Schon's original work (1983) suggests that reflection-in-action may need to operate in a shorter time-scale, rather than a time-delayed critical dialogue after a lesson. Schon essentially describes the vital components of reflection-in-action as involving, ... conscious action; a critical function; on-the-spot experiment. Current usage of the term in teacher education (SMC, ES 821 (1984) follows Mackinnon's (1987) interpretation. This describes reflection-in-action as including post lesson evaluation and is not, therefore, necessarily

'on-the-spot' as in Schon's (1983) work. The important ingredients being that the reflective process is relatively immediate, of narrow focus and personal. This change in time-scale, for analysis after action, may point to the inappropriateness of Schon's (1983) original proposals, equally it may represent the evolution or adaptation of Schon's (1983) work to 'best fit' teacher education usage. The apparent contradiction of post-lesson reflection being classified as reflection-in-action may also have arisen from the need to emphasize to trainees that lesson evaluation is an important and integral component of effective teaching.

C. Reflection-on-action

A variety of models for reflection-on-practice are presented in the next section. The essential ingredients here tend to be that the reflective process is time-delayed, of broad focus and may be interpersonal - as the nature of the problematic issue involves aspects beyond the control of the teacher or benefits from collaborative discussion. Such issues as Yr9 female pupils' interest and enthusiasm for the Physical Sciences; the development of problem-solving / decision-making skills in Key Stage 3 Science, the behaviour and homework attitudes of Yr8 pupils are examples of suitable topics for reflection-on-practice.

Thus reflective processes are, for the sake of explanation and use in education, divided into three levels. Across the levels there is an increase in the time between the stimulus event and subsequent action, an increase in the level of thought and decision-making given to the process and increase in the breadth of the event considered.

In summary *knowing-in-action* is personal, fast acting and does not involve conscious thought. Knowing-in-action represents a set of conditioned reflexes. Here a teacher's response to a specific event is generated automatically due to previous learning through exposure to that stimulus-event. Examples would

include a teacher's monitoring by eye of their pupils, the awarding of praise or reprimand to pupil actions, body language and voice projection at the start of a lesson. *Reflection-in-action* is likely to be a personal and private activity. It tends to be an immediate, personal, narrow focus, evaluatory event. An example could be the analysis of a problematic issue, such as time-management, effective use of resources, pupil questioning and answering technique within a lesson. It has already been noted that in teaching Schon's (1983) reflection-in-action often occurs after the teaching has occurred (post-lesson evaluation) and does not as Schon describes occur *during* the action. *Reflection-on-action* is likely to be interpersonal and collegial. This tends to be a considered, thus time-delayed, broad focus, evaluatory activity. The reflection could be collaborative. Examples could be a review to the approach in a scheme of work for Yr 7 pupils or a review of a teacher's routines and practices in their classroom practise.

Models for reflecting-on-practice

Reflective practice involves creating time to think and to critically evaluate aspects of professional work. The outcome should be a greater understanding of one's actions and/or the resolve, based on evidence, to change and improve practice. Schon (1983, 1987) provided a three-level description of reflection and Mackinnon (1987) interpreted this for use within teaching. However, there are a wide range of reflective models suitable for different people in different situations. Essentially the models formalise human thinking and make it more scientific. They provide a logical framework for reflection through a specified sequential process that can be used to inform and improve subsequent practice. In the following section a summary of some models for reflection-on-practice for teachers is presented.

Roberts and Chastko (1990) argue that their framework, based upon four elements, provides a reflective capability for viewing teaching. The four elements are the :

- (i) subject matter
- (ii) teaching strategy
- (iii) objectives and
- (iv) student response.

Teachers would systematically analyse the 'significant issue' chosen for reflection under these categories. This provides a logical structure and clarifies the visualisation of the situation. This, question-structured approach, is similar to the six questions that teachers should ask themselves, recommended by the Open University, Curriculum in Action course, P234 (1991):

- (i) what did the pupils actually do?
- (ii) what were they learning?
- (iii) how worthwhile was it?
- (iv) what did I do?
- (v) what did I learn?
- (vi) what do I intend to do now?

Peers in Tresman and Edwards (1993), through reflection, was able to see that he:

....made wholesale assumptions about my students

and :

A formal teacher-driven approach may serve to conceal rather than to deal with students' learning problems.

(Peers, 1991 in Tresman and Edwards, 1993, p.32)

As a result he encourages his students to work together - in a mutually beneficial way - and involves them in student-driven discussions which can help individuals to come to terms with the depth of their understanding.

Fox in Tresman and Edwards (1993), in a capacity very similar to my own, is critical of the use of end-of-course reflections which he argues:

....do not provide an opportunity for course members to own and take some control of the consequences of their reflections.

(Fox, 1992, in Tresman and Edwards ,1993, p.35)

He advocates and uses a system of *reflective diaries* to integrate reflection with action and so affect the day-to-day life and operation of the course. These individual personal diaries were analysed and feedback sheets prepared.

Fox (1992) comments :

Although the system was devised primarily to link reflection with action, it became clear that the reflective process stimulated by the diaries was also effective in helping the course members to clarify and articulate their own developing concepts and feelings - and not simply those concerned with science in the primary classroom.

(Fox, 1992, in Tresman and Edwards ,1993, p.37)

Fox's recommendation for keeping reflective diaries, along with the college's informal encouragement for trainees to keep such diaries stimulated the desire to find out more about trainees' perceptions of the value of reflective diaries in ITT. Consequently, the value and practice perceived by trainees in the keeping of reflective diaries became one of the research questions (qu. vi)

Baird et al. (1991) evaluated, in a three year case study, the extent to which a model of *collaborative reflection* could enhance the teaching and learning of science. Research questions (ii) and (vi) in this study (table 7.1) incorporated an exploration of trainees' perceptions of collaborative reflection. Baird et al.'s (1991) study was conceptually based on three areas - metacognition,

constructivism and the nature of individual change. The study involved student science teachers, newly qualified and experienced science teachers plus pupils and the authors. The study was developed from the authors' realisation that constructivism complements metacognition in effecting personal change. The authors inferred that a reason for lack of success in bringing about conceptual change :

...is that (previous) strategies paid insufficient attention to assisting the learners to become sufficiently metacognitive for them to control the nature and direction of change.

(Baird et al., 1991,p.62)

The authors say that this study was strongly influenced by the Project for Enhancing Effective Learning that Baird and Mitchell had undertaken earlier. This demonstrates that changes in the metacognition of students could occur only after changes in teachers' metacognition, and that a method of collaborative action research was effective in promoting teachers' intellectual development. The different participants share the endeavour, bring different perspectives, and so support change. Attention was also paid to personal reflection.

The methods used in this study included shared reflection on classroom practice, involving the usual class teacher, the student and a participant observer. Despite the difficulties - "a humbling experience" (Baird et al. 1991, p.65) - all the teachers valued the experience and believed that it had made them reflect more deeply about their practice and this had led to positive changes in their classroom attitudes, awareness and actions.

They found that the teachers changed to become more perceptive, resourceful and purposeful classroom practitioners. The authors claim that their findings affirm the need for personal and professional reflection and the facilitation of reflection through collaboration.

Handal and Lauvas (1987) present the notion that every teacher possesses a *practical theory of teaching* and that this is the strongest determining feature in their execution of professional practice. Practical theory is seen by them as :

....a person's private, integrated but ever changing system of knowledge, experience and values which is relevant to teaching practice at any particular time."

(Handal and Lauvas, 1987, p.79)

So, practical theory is a 'complex bundle' of practical experience, reading, listening, and looking at other people's practice integrated with the changing perspective provided by individual values and ideals. These 'bundles' are indefinite in number since everyone's knowledge, experiences and values are different. All teachers have experienced educational situations as pupils and further experience is gained as student teachers and during post-qualification teaching. The quality of these experiences - the levels of learning - will vary considerably from individual to individual. Handal and Lauvas (1987) refer to the idea of 'praxis', in emphasising the importance of reflection, as well as action, in developing understanding. Additional knowledge is added to that gained at first hand by experiencing the views of others - visiting speakers, text book authors, research reports, colleagues' ideas. Handal and Lauvas (1987) say that our own values - personal, political, spiritual - are seen as being strong determining elements in our practical theory. They write :

Values, as we know from psychology, heavily influence our perceptions of things we experience ourselves, as well as what we perceive and accept in ideas presented by others. We sort out, delete and integrate, interpret and distort received impressions on the basis of what we hold to be good and right."

(Handal and Lauvas, 1987, p.83)

It is clear from such work that the practical theories of a teacher acquired through their education, teaching and other professional experiences need to be considered and unpacked as they are paramount in influencing the discussion and decisions they make in reflective practice.

Peters (1991) proposes a model for reflective practice that involves four stages. He suggests that a reflective process should include stages that *describe*, *analyse*, *theorise* and *act* on the issue being considered. Consequently he calls this the DATA method of reflection. He suggests that firstly you should describe what it was that you did and what happened. Secondly you should analyse why you decided to use this approach. Thirdly you should consider by reflection whether the theoretical assumptions behind your initial decisions provide a complete and accurate explanation of what happened. If they don't then revised theoretical assumptions must be made and subsequent action must be modified. This model appears to bear many resemblances to Kolb's (1984) experiential learning cycle of plan, act, review preceding future modified action.

Mattingly (1991) offers a storytelling reflective method. He suggests that storytelling is something that most people do informally on a daily basis with colleagues. Mattingly (1991) suggests that storytelling can be done more formally as an aid to reflection. This method has been used with teaching professionals. A narrative is constructed demonstrating what happened and why, what was expected to happen, what it meant to the narrator and how it would have affected future teaching. This formalisation of storytelling helps to make sense of an experience and aids future reflection.

The models discussed in this section all contain elements which could be useful in guiding reflection-on-practice. Mackinnon's (1987) reflective cycle

model; initial problem setting, reframing, resolve - is, I feel, particularly useful when applied to an individual lesson. For some trainees the storytelling model offered by Mattingly (1991) could supply easier access at the start of reflection-on-practice. In both these models there are links with the continual review advocated by Lewis and Dowling (1992), and Soper's (1992) scrutiny of every aspect of teaching. Undoubtedly, like Peers (1991), there would be evidence needed to justify, "wholesale assumptions" about students. The Roberts and Chastko (1990) approach - consideration of subject matter, teaching strategies, objectives and student responses - is particularly useful to students reviewing on a longer-term basis and making comparisons across the different ages and ability ranges of their classes. The arguments of Baird et al. (1991) relating to collaborative reflection and an agreement for change are persuasive and could be of considerable use within the trainee peer group. Although of potential merit in the classroom, I feel it could take management skills beyond the scope of many beginning teachers to reflect effectively and productively with their pupils on a collaborative basis. The practical theory approach, argued by Handal and Lauvas (1987), at both the individual and group level is worthy of further analysis. Their "frame factor" analysis, similarly, can be developed in relation to what is immediately apparent and what might be revealed through further discussion. Calderhead's (1988) "images" are recognisable from personal experience and could be further probed.

Mentoring models

Maynard and Furlong (1993) establish three mentoring models, which are subsequently widely referred to and developed by other authors. Their models, or more strictly the terminology of their models are used in the college's (sec) PGCE programme.

(a) Apprenticeship model: the trainee has the opportunity to see the skilled practitioner in action and learns through exposure to the 'expert'. Problems here are that people vary in teaching/personality styles and that experts are, by definition, people who make teaching look easy (Berliner 1989). These factors may restrict the trainee's learning from teacher observation. Experienced teachers ensure that difficult aspects in a lesson are effectively and fluidly managed. The novice teacher may be unaware of the potential management issues and the strategies used by the teacher to maintain smooth transitions and lesson continuity. Sharing of practice and collaborative teaching should, though, identify these aspects to the mentee.

(b) Competence model. This could be re-named, from 1998, as the Standards model. The performance of a trainee is assessed against a national set of competences, The Standards for the award of Qualified Teacher Status (QTS) (DfEE 4/98). These constitute a criterion-referenced checklist covering a broad-spectrum of teaching duties with some similarities to the MOT test. By this I mean specific (assessable) features recognized as at least satisfactory which allow the certificate (MOT /QTS) to be awarded. The MOT, thus QTS certificate gives no assurance beyond basic road or teaching worthiness. Some are concerned that this model can lend itself to detailed tick lists, which record the student undertaking specific tasks but ignore their holistic teaching capability. There is also concern of student plateauing (Berliner 1989) as competences are achieved and 'passed' but not then developed and extended, as no benefit (to passing the course) can be gained. The notion of setting 'hurdles' of competence may well encourage the student to train hard enough to just clear these hurdles to achieve success. In such an assessment scheme the benefit of doing more is not, overtly, valued. This approach would impair the achievement of proficient and expert teacher status, which may in some areas be unobtainable by trainee teachers following a 36 week course. Nevertheless political, quantifiable assessment, regimes do require that the competence-based model be used in student teacher training and assessment.

(c) Reflective model

This stems from Dewey (1933), where ‘routine action’ contrasted with ‘reflective action’. Stenhouse's (1975) notion of the ‘extended professional’ teacher and the work of Schon (1983, 1987) on reflective practice have also been influential.

Essentially it requires the formalization of the ad-hoc reflections / evaluations and modifications that teachers make to their lessons. Reflective practice involves the establishment of clear procedures and routines to take stock of teaching, to identify strengths and weaknesses and to set clear targets for improvement. Some would argue that it is a model, which makes the teacher’s role more professional - indeed that formalized reflection is a professional duty. Reflection could be seen as a scientific approach to problem-solving and decision-making processes.

Target-setting is important for trainees as they need not only to see why they should change their practices but also to be guided by the mentor on how to achieve their target. Much of the work on reflective thinking focuses on problematic issues (Schon 1987; Mackinnon 1987) but it is equally important that successful issues are also identified. Only by acknowledging the ingredients of success can one learn how to, *intentionally*, repeat these successes later. Learning to teach using reflective strategies which ‘balance’ successes with problems is likely to improve the morale and motivation of trainees Burrill (1995, 1997). Mentors would be better advised to focus on *significant issues* for reflection, rather than the negative bias resulting from a *problematic issues* focus.

Husbands in Brooks (1997) develops Maynard and Furlong’s (1993) mentoring model and extends their apprenticeship, competence, reflective descriptors. Husband’s variations include:

(i) *the apprenticeship model and the mentor as a skilled craftsperson*

Husbands in Brooks (1997) says apprenticeship represented the first formal attempt to train teachers systematically. It was a model used extensively in the nineteenth and early twentieth centuries. It was a means by which pupil teachers, destined to work in elementary schools were trained. Training was carried out on the job and involved trainee and trainer in a pupil-master craftsperson relationship. Learning by, 'sitting next to Nellie', observing the teacher and then trying to emulate them through trial and error learning featured predominantly.

Apprenticeship is still widely used in industrial settings for training in skilled trades.

The key question is whether a mode of training useful for passing on lower-order craft skills is appropriate for education in the more intellectually demanding, higher-order professions? Attempting mechanically to reproduce what one had observed without developing insight into the processes at work proved an unreliable form of teacher preparation and the pupil-teacher system was abandoned.

Teaching is not a collection of relatively simple craft skills...

(Husbands, 1997 in Brooks, 1997, p.18)

Few educationalists would support a solely apprenticeship model but in the recent past it has seen some political support. The Licensed Teacher Scheme (DES, 1988) suggested a re-emergence of apprenticeship training methods which many educationalists presumed would de-professionalise teaching.

(ii) *the competence-based model and the mentor as trainer*

There are similarities here with the apprenticeship model but more responsibility for training is expected from the experienced teacher:

the trainer is seen as being in possession of skills and capacities into which the trainee must be inducted. The trainer in this model, however, bears a greater responsibility for providing a systematic programme of instruction geared towards producing pre-specified competences than was the norm with the traditional apprenticeship model of ITT.

(Husbands, 1997 in Brooks, 1997, p.20)

And continues:

competence models are based on pre-specified behavioural outcomes and skill-related competences which the training and assessment procedures are tailored to meet. The job of the trainer is to devise a programme of activities, which allows the trainee to fulfill the assessment criteria, which may be detailed in a checklist of performance criteria and a profiling system.

(Husbands, 1997 in Brooks, 1997, p.20)

The competence-based assessment (Standards for the Award of Qualified Teacher Status, DfEE 4/98, DfES 02/02) is the official requirement of all ITT courses and all ITT courses must demonstrate that they adopt it to achieve accreditation. Thus, government policy offers a clear steer towards treating the ITT provider and mentor as a trainer. Indeed, government documents consistently refer to the preparation of beginning teachers as ITT not ITE (e.g. CATE 1992; DFE 1992; OFSTED 1993, DfEE 4/98, DfES 02/02).

(iii) Mentoring in the reflective practitioner tradition

Husbands in Brooks (1997) draws mainly upon the work of Schon and Elliott and describes the reflective mentoring model as one which involves:

- (a) collaboration with clients in identifying, clarifying and resolving their problems.
- (b) communication and empathy with clients to understand situations from their point of view.
- (c) an holistic understanding of how events influence professional practice rather than the study of case-specific events.
- (d) self-reflection as a means of overcoming stereotypical behaviour.

(Husbands in Brooks, 1997, p. 84)

The reflective model suggests that learning to teach is a much more tentative, exploratory, context-specific, value-laden activity shaped in and through experience than pure apprenticeship or competence training would allow.

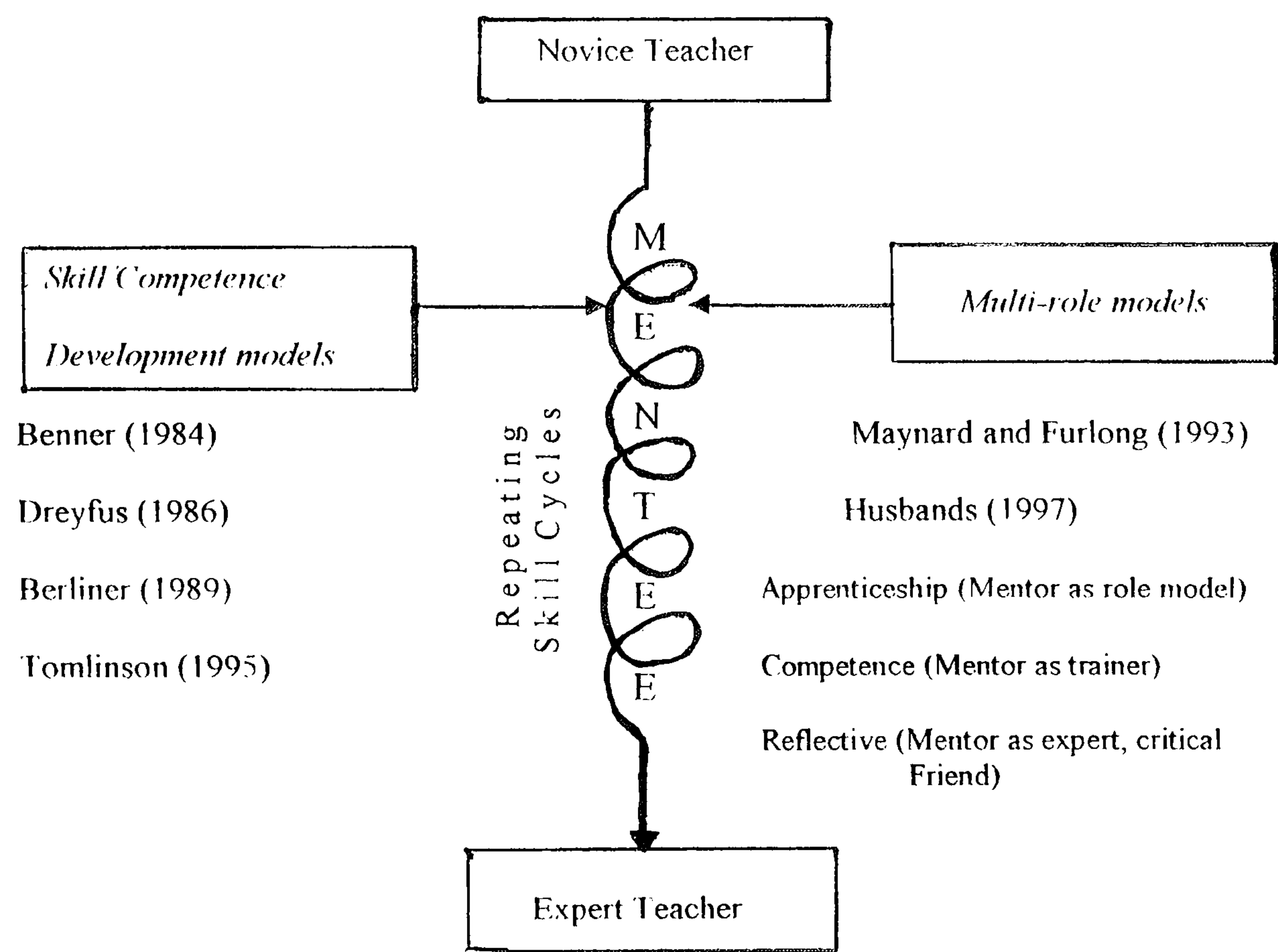
Hagger and McIntyre (1996) are advocates of 'whole-school' mentoring and suggest that our understanding of 'mentor', with its connotation of a very personal relationship, may have acted against some systems of ITT. They say that there has been an over-emphasis on the individual responsibility of a particular person as opposed to the institutional responsibility of the school. They provide evidence from secondary ITT projects in Keele and Oxford to support this statement. Hagger and McIntyre (1996) point out, using evidence from a primary MMU project that although the whole school mentoring approach is supported they acknowledge that not every teacher would make a good teacher educator. The 'mentoring school' was also an important aspect of the OU (1994) PGCE programme.

Summary of mentoring models and early teacher development

The eclectic nature of teaching, the variety of skill levels it involves and the intra and interpersonal dimensions of human relationships indicates that there will be no single correct model for mentoring. The development of teaching competence with the potential that, in due course, expertise can be achieved,

demands the use of a variety of mentoring models. Figure 8.3 presents an integration of ideas from published work for effective mentoring in ITT.

Figure 8.3. An integration of ideas for the combined use of mentoring models in ITT.



However, Roberts (2000), in a phenomenological study of mentoring, says educators still hold different views on the definition and processes of mentoring. He argues that more agreement that incorporates ideas from published work is important for progress in mentoring trainees.

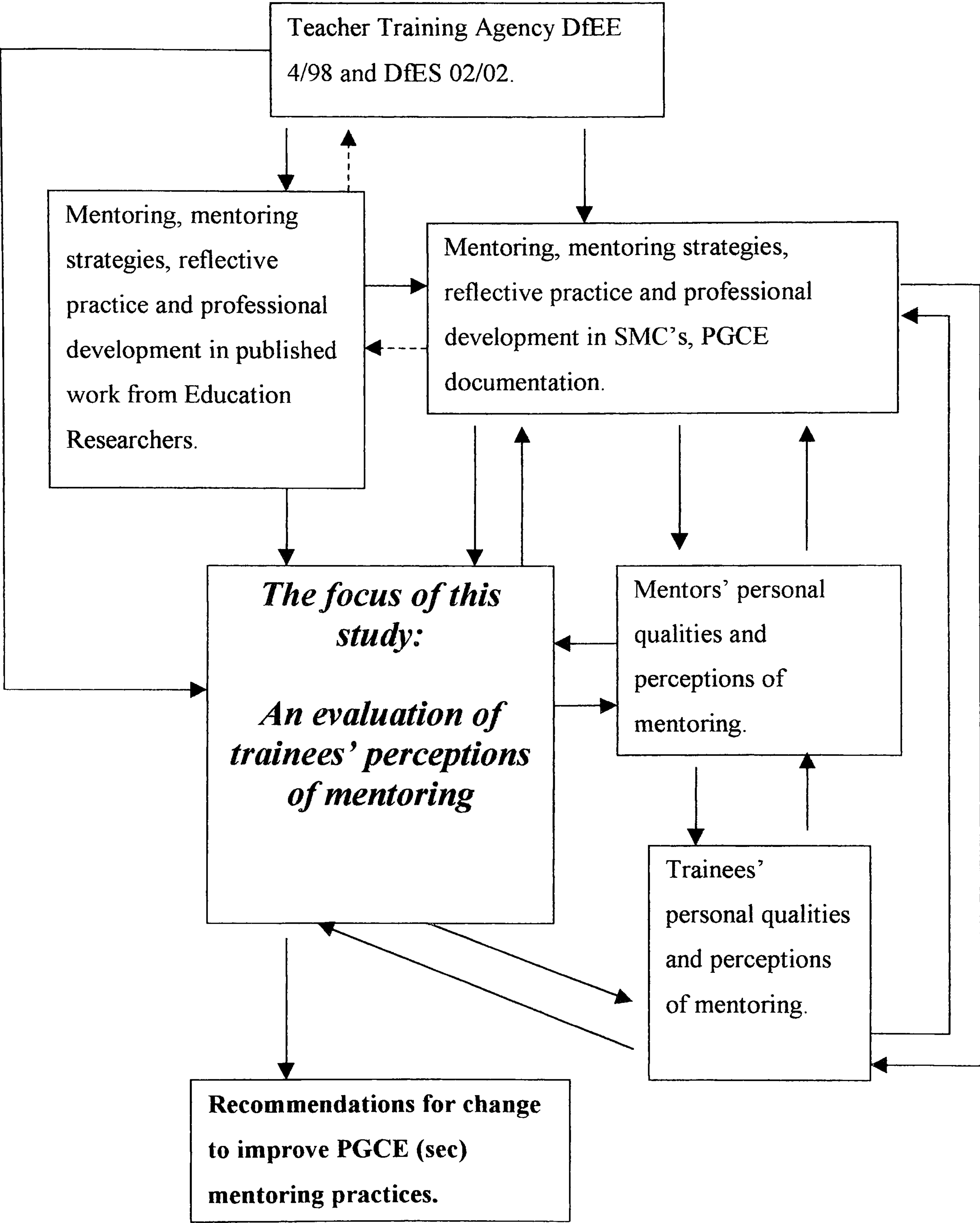
The limitations for the development of teacher expertise in the PGCE course and reservations about the appropriateness of some skill-based models for ITT have already been presented. It needs to be remembered that many trainees are never expected to be experts at the end of their ITT course, as success, according to DfEE 4/98 and DfES 02/02, is judged by overall *competence not expertise* against a set of teaching standards.

Summary

The purpose of the literature review was to explore the images and emphases given to professional development, meanings of mentoring, mentoring strategies and models in ITT expressed by educational researchers in recently published work. Discussion over skill-based or competence and reflection-based approaches to ITT were also presented.

The next stage involves establishing the meanings of these mentoring terms from the mentees' perspective, which is the focus of this research project. Figure 8.4 provides a summary of the inter-relationships of mentoring perspectives between academic published material, TTA requirements, college PGCE programme documentation and this study. It indicates how the qualities and reactions of mentors and mentees may influence the interpretation of documentation. Figure 8.4 proposes that the realisation of mentoring is, to some degree, personalised by the individuals involved.

Figure 8.4. The inter-relationship of the structure of ITT and mentoring perspectives with this study



9. METHOD

The focus of this study, “an evaluation of trainee teachers’ perceptions of mentoring” was organised into four themes:

- A. Mentoring
- B. Mentoring strategies related to the planning, teaching and evaluation of lessons
- C. Reflective Practice
- D. Professional Development

These themes were explored by ten key questions for investigation (table 7.1). A suitable quantity and quality of data needed to be collected in order that appropriate conclusions could be formulated on the value trainees’ perceive with respect to aspects of mentoring. From the outset it seemed important to create meaning and understanding from the evidence collected rather than to collect data aimed at supporting or refuting pre-established hypotheses. This, grounded theory (Glaser and Strauss, 1967), approach was important to the investigative perspective. The study deals with people and institutions and needed to be conducted with an appropriate regard to ethical practice in educational research. Prior to a discussion of the construction of the research tools used in this study a consideration of research methodology, grounded theory and ethical practice in educational research will be presented.

Underpinning philosophy and Social Science research methodology

OU course E835 (1996) states that whatever the style of investigation a rigorous and systematic approach is important. Silverman (1997) emphasises the need to establish fact securely by substantiating claims with evidence:

The belief that a *social science*, which takes seriously the attempt to sort fact from fancy, remains a valid enterprise.

(Silverman, 1997, p.1)

This chapter begins by presenting and discussing the approaches to social science research.

Whatever the research undertaken *absolute knowledge* can never be obtained. The best that might be achieved is a *better or shared understanding of phenomena*. Phillips (1989) talked of the concept of truth being a legitimate and desirable quality and Eisner (1992) saw limitations to objectivity. He said that although procedural objectivity is achievable (researchers use and agree on sound methodology) ontological objectivity is unobtainable (as the understanding constructed by our observations is 'framework-dependent'). This is similar to Popper's (1963) statement that unfocused observation is absurd but the very nature of our focus determines what we choose to see.

These ideas suggest that we need to be wary of the methods and focus of data collection. Even though 'best methodology' might be agreed upon (Eisner's procedural objectivity) the interpretation/analysis of the data is not clear-cut but is observer-dependent (Eisner's unobtainable ontological objectivity).

De Landsheere (1988) noted that, from the turn of the last century to the 1960s, positivistic models drawn from the Natural Sciences drove educational research methods. Rigorous, quantitative methodology, undertaken and analysed by external researchers; with the aim of producing empirical generalizations, typified their research methods.

Over the last 30 years, stemming from the limitations of such methods in a social science setting, more emphasis has been placed on the validity of qualitative methods in educational research. The perceived value of teacher-research embodied in Stenhouse's (1975) extended professional, Donaldson's (1978) critique of some of Piaget's work and the action research movement of Kemmis (1988) have encouraged this change in research style. Hitchcock and

Hughes (1989) describe such qualitative researchers as interpretative ethnographers.

Hammersley (1993) points out that, in spite of a shift towards qualitative methods from those involved in educational research, political pressures have required a greater emphasis on quantitative methods. Since the Education Reform Act (1988) the accountability of schools has increased and Governments have required the publication of quantitative data on school performance (League Tables for SATs, GCSE, 'A' level results, truancy figures, OFSTED ratings). This increased emphasis for quantitative data, arguably for quick public consumption, runs counter to the descriptive, contextual research methods that many qualitative researchers perceive as more valuable in enriching an understanding of education. Consequently a tension may exist between the State's requirement for reporting educational phenomena and researchers' beliefs about appropriate methodology in educational research

Quantitative and Qualitative research methods

Coolican (1990) succinctly expresses the difference between quantitative and qualitative approaches as:

Quantification means to measure on some numerical basis
....whenever we count or categorize we quantify.A
qualitative approach, by contrast, emphasizes meanings,
experiencesdescriptions and so on. Raw data will be exactly
what people have said (in interview or recorded conversation)
or a description of what has been observed.

(Coolican, 1990, pp.36-37)

Quantitative research methods

Quantitative methods involve:

- the search for causal relationships conceptualized in terms of the interaction of variables, some of which (independent variables) are seen as the cause of other (dependent) variables.
- the design and use of standardized research instruments (tests, attitude scales, questionnaires, observation schedules) to collect numerical data.
- the manipulation of data using statistical techniques.

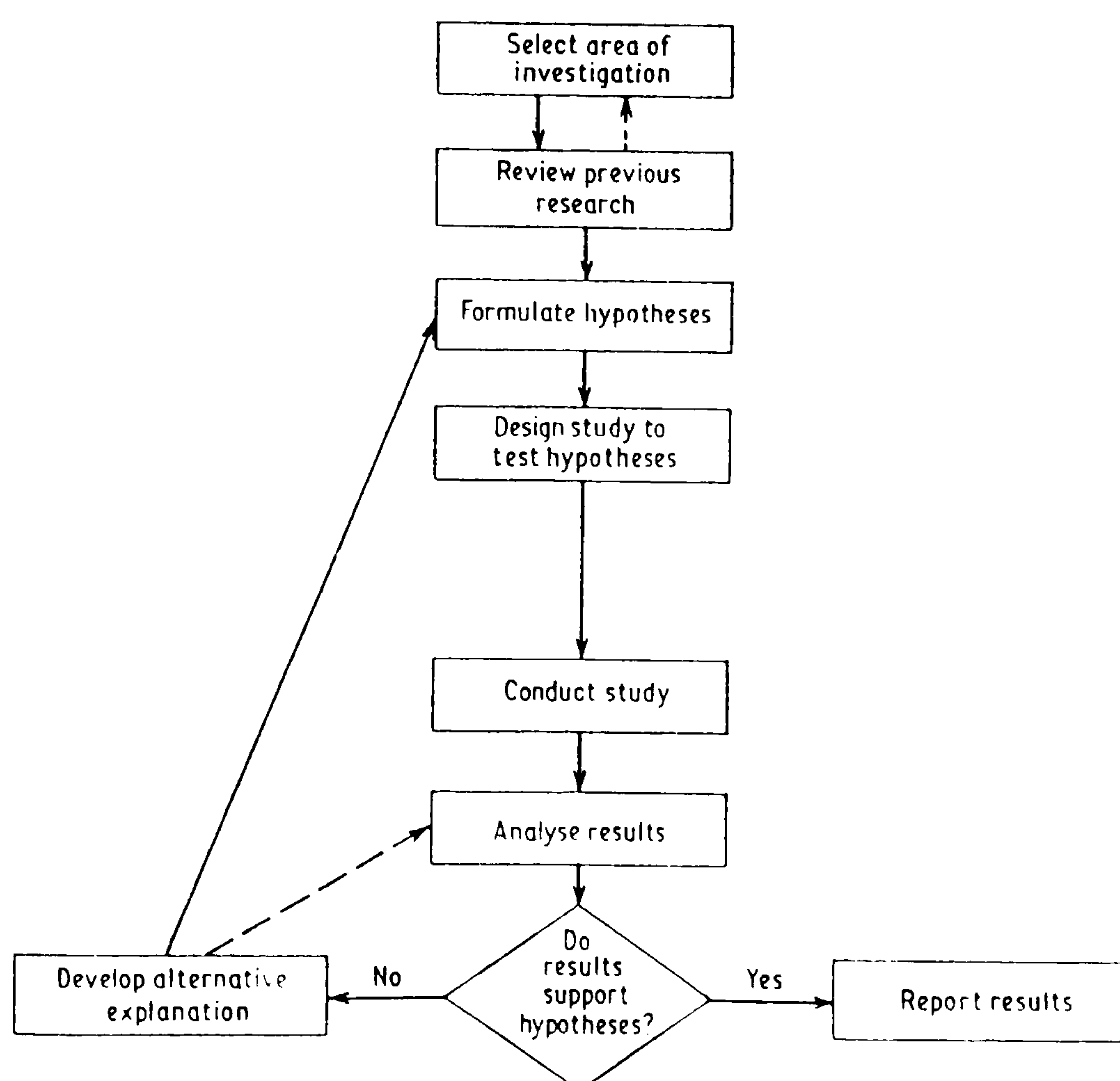
(Adapted from E824 Study Guide, 1994, p.84)

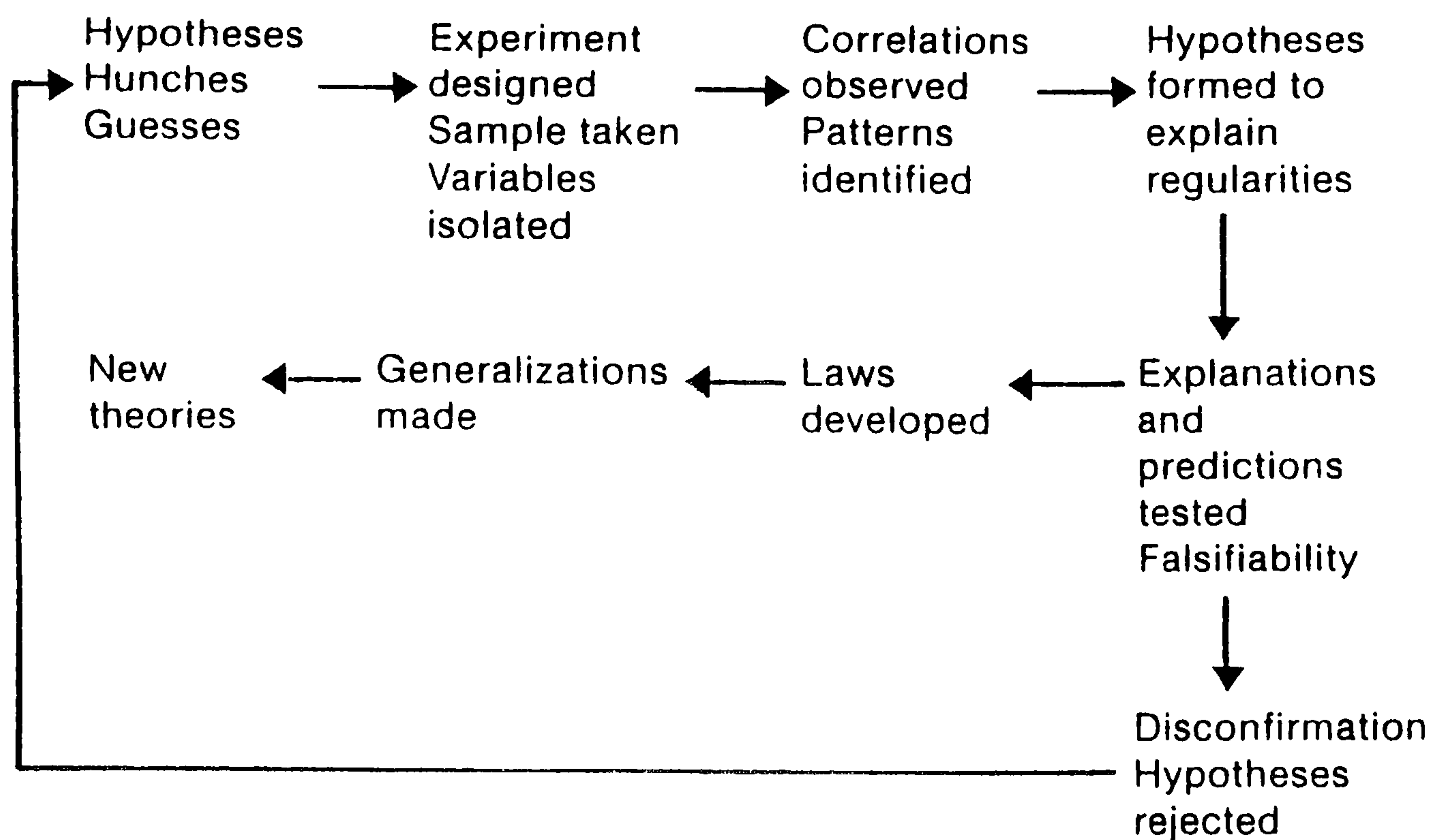
The requirements of quantitative analysis determine, to a large extent, the methods used by researchers - the data needs to be in numerical form e.g. ages of pupils, examination marks, the record of absenteeism. In some cases the data are already available in records kept at school, local or national level but in other cases the researchers have to generate the data themselves.

Quantitative methodology is associated with the traditional design for research that comes from the Natural Sciences operating within the positivistic paradigm. Figure 9.1 provides outline structures as examples of such research models.

Figure 9.1. Examples of research models

(a) Research 'by the book' Boehm, (1980, p.496)





Hitchcock and Hughes (1989) point out that the positivistic paradigm assumes that the natural sciences provide the only foundation for true knowledge and that the methods techniques and modes of operation of the natural sciences offer the best framework for investigation of the social world. However, it is well known that the theoretical scientific research model is commonly ignored *in the practice* of eminent scientists. Walford (1991) writes:

....it is now widely recognized that the careful, objective , step-by-step model of the research process is actually a fraud and that, within natural science as well as within social science, the standard way in which research methods are taught and real research is often written up for publication perpetuates what is in fact a myth of objectivity.

(Walford, 1991, p.1)

Qualitative research methods

Qualitative research methods are concerned with investigating natural settings in as unobtrusive a way as possible. Their prime purpose is to see life as it is actually lived, by a, "fly on the wall" or non-interventionist means. Qualitative methods endeavour to record day-to-day, real-life situations through techniques which gather information without (or by minimally) disturbing the environment. The methodology does not involve the construction and execution of artificial experiments. The main features of qualitative research methods are:

- a focus on natural settings
- an interest in meanings, perspectives and understandings
- an emphasis on process
- inductive analysis and grounded theory

(E824 Study Guide, 1994, p.50)

The E835 Study Guide (1996) supports and develops the above suggesting that:

- *qualitative research explores particular educational phenomena rather than setting-out to test pre-defined hypotheses* - thus proposing a phenomenological rather than positivistic emphasis has importance.
- *qualitative data is usually unstructured* - thus consists of verbal descriptions in every-day language collected from such sources as open sections of questionnaires, informal conversations, interview responses and observational records (including audio and visual recordings of behaviour, verbal descriptions of field notebooks).
- *that the sample population in qualitative surveys is typically small* - thus contrasting with large sample sizes in systematic, quantitative investigations.

- *the analysis of data is usually a verbal description and interpretation of human actions and values* - thus the human processes involved (the how?) have importance over the content matter (the what?) of the situation. The statistical treatment of data has little importance in qualitative work.

Table 9.1, informed from a variety of sources, provides a summary of the main characteristics of the two research methodologies.

Table 9.1. A summary of the main characteristics of quantitative and qualitative research methods

Quantitative methods	Qualitative methods
Large sample number	Small sample number
Numerical Data collected	Verbal, observational data collected
Data quick and easy to collect	Data time-consuming to collect
Hard, reliable data	Rich, deep data
Tables, graphs, charts constructed	Case-study verbal accounts
Inferential statistics presented	Little if any statistical treatment
Objective researcher	Subjective researcher
Researcher an 'outsider'	Researcher integrated with process
Researcher has little future effect	Researcher determines further action
Hypothesis driven	Driven by desire to understand more
Sample popln. little influenced by research	Sample population evolves from research
End result is most important	Process is most important
Conclusions, remedies, further work noted	Situation may suggest new inquiry
Findings applicable to wider situation	Findings specific to situation studied

A rationale for the use of combined methodologies in this study

It is clear that in some situations the object to be investigated suggests a particular style of inquiry and little doubt of which method should be employed exists. The documentation of PGCE trainees' ages and gender are obviously quantifiable statistics as would be the time spent talking with mentors each week and evaluating their lessons. It is important to know these facts in order to see the variation within a population and to be able to make comparisons with other trainee teachers on similar and different courses. If, however, the *reasons* for the age and gender profile and the purposes trainees see in talking with their mentors and evaluating lessons need to be known then qualitative methods of inquiry would seem most appropriate - as these would be more likely to give reasons and understanding to such behaviours.

There were three main reasons for choosing to use a combination of quantitative and qualitative approaches to the data collection in this study:

(i) Current practice in education research

Hammersley, quoted in Richardson (1996) accepts that qualitative and quantitative approaches represent fundamentally different paradigms but goes on to say:

It is true that there are research reports that provide only numerical data and others that provide only verbal data, but there is also a large proportion of studies that use both. Thus many research reports combine tables and statistical analyses with the use of quoted extracts, interviews or field notes.

(Hammersley in Richardson, 1996, p. 161)

The Faculty of Education within which I am employed gathers trainee course data in the form of open and closed questionnaires as well as from informal and formal discussions with students. The statistical and descriptive data are

presented together in the summary analyses of courses. I have been involved in the construction of some of these research tools as a member of the Faculty's Academic Standards Committee. It is clear that both quantitative and qualitative aspects are seen as valuable for educational purposes and thus a mixed methodological approach should have value in this research.

The Open University's Faculty of Education and Language Studies adopts a mixed methodological approach when collecting student cohort data e.g. the evaluation of the EdD Residential Weekend in January 2002. In my role as an Associate Lecturer with the OU's MA(Ed) programme I received observational (monitoring) feedback of my tutorials using an open and closed (qualitative and quantitative) proforma. I have received monitoring comments on my marking of student coursework (TMAs) in the same, mixed-method, format.

Jones (2001) and Liversidge (2002) researched mentoring perceptions of trainees and mentors. They both made use of a mixed methodological approach

Clearly the contemporary use of a mixed methodological approach, for the purposes of educational research, is widespread. As this research seeks to establish both factual information as well as perceptions and values of trainees a combined methodological approach appears to be relevant and appropriate.

(ii) Providing the most suitable data for the research questions being asked

The key questions of this research (table 7.1) would require both quantitative and qualitative data to be collected in order that conclusions could be based on suitable evidence. Quantitative approaches would enable aspects such as age and gender profile to be established. This has relevance in contextualising the findings and in giving confidence to transfer the findings to other ITT courses. For example, the PGCE Science trainees studied in this report (N = 48) had, at course outset, a mean age of 27 years with 60% being female. In contrast the college's undergraduate ITT Science trainees (N = 57) had an average age of 21 years, at course outset, with 95% being female. Clearly, it seems important to know that the two groups, both following ITT Science courses, are quite

different in age and gender balance. It is quite probable that their perceptions and responses to mentoring may be influenced by these differences.

There were other facts that it seemed valuable to establish such as:

- how long did trainees take preparing and reflecting on a lesson they had taught?
- how many of the trainees kept reflective diaries?
- how many complete lessons of experienced teachers had trainees observed?
- how many hours of observation, collaborative teaching and solo teaching had trainees done at early and late times in their course?

Such questions enabled quantitative data to be gathered from the entire cohort and provided new knowledge that could inform discussion and future action. The factual knowledge gained would also be useful to provide a setting, or context, in which qualitative data on student perceptions and values were presented.

Within the observational study, essentially a qualitative tool, aspects of quantification seemed valuable. Such features as:

- number of people present at the observation / review meeting
- the organisation of people and chairs in the room (sketch plans drawn)
- duration of pre-observation meeting, observed lesson, lesson debrief, Tri-Partite Review meeting.

These factors helped to describe the physical environment created and gave durations for the different phases, which could be used for comparison and as an indication of the perceived value or weighting of different aspects of the process.

(iii) Historical reasons and longitudinal research

As part of an MA (Ed) dissertation at Lancaster University (1994-5) and as part of E835 (1997-98) I had investigated the valuing of reflective practices in PGCE Science trainees. This work had been undertaken before the introduction of DfEE 4/98 and the consequent revalidation of the 1 Year PGCE (sec) programme at SMC (1999). I was interested to see how time and changes in

ITT course structure/assessment might have influenced students' reflective practices. To do this I needed to replicate my previous work and this had both quantitative and qualitative dimensions within it.

Triangulation

Another aspect worthy of consideration is the notion of triangulation. Triangulation uses different methods of inquiry or collects data from different sample groups to investigate the same issue (Gall, Borg and Gall, 1996). This may, through quantitative and qualitative investigative styles, provide a fuller understanding of the phenomenon by 'seeing it' from different perspectives.

Eisner (1992) points out that we can never have complete knowledge, or see the world just as it is. He makes the point that objectivity, as such, cannot be obtained by human investigators. He also establishes that, in the search for a fuller understanding, we should accept that tainting objectivity with a human face should not be considered wrong. Thus, by using both quantitative and qualitative approaches, along with a combined perspective generated through triangulation a better understanding of the phenomenon (arguably closer to true knowledge) may be revealed. Additionally, a consideration of the perspectives of each of the different 'players' to specific mentoring issues would constitute triangulation. For example trainee teachers', school mentors' and college tutors' views on the purposes of mentoring could be examined to compare their understanding of these issues. The situation may be seen in a new light when information from a variety of investigative styles is gathered together. This study provides more knowledge and understanding of mentoring from the trainee perspective. It triangulates some of the findings with the better known and published mentor perceptions of mentoring.

A discussion of the nature of educational research and the features of quantitative and qualitative methodologies have been presented. These ideas

were to be used to guide the production of the research instruments for this study. A number of other factors also needed to be considered. These were the quality of the research study itself, a grounded theory approach and the incorporation of appropriate ethical practice.

Producing high quality research

The quality of a piece of research can be judged by its validity, relevance and reliability. The E835 Study Guide (1996) refers to validity and relevance, whilst, Frey and Mertens-Oishi (1995) refer to validity and reliability. These research quality factors were important in constructing the rationale for the methodology.

Validity, according to Frey and Mertens-Oishi (1995) is the accuracy with which the survey measures what it is supposed to measure.

The E835 study guide (1996) gives more detail and would include aspects of:

(a) *plausibility*- does the report fit in with your expectations of the situation for example, does the situation presented seem plausible? In other words does the report present a description of events which seem in-line with your own expectations resulting from your experiences/knowledge of similar circumstances? It could be that the situation presented seems very fictitious. The ITT and mentoring situation described in this report should be seen as plausible. St. Martin's College is nationally the second largest Teacher Training Institution but there are many ITT providers in the country (n = 130, Teacher Training Agency, 2001). All such courses are similar in structure as they have to follow the requirements of DfEE 4/98, DfES 02/02.

(b) *credibility* - are the claims made reasonably supported by the evidence gathered? Are the author's judgements of it in-line with your own? Are the conclusions drawn (theoretical inferences) appropriate. There may not

be sufficient evidence to draw firm conclusions in some cases. In other cases the author may unreasonably draw conclusions from the data collected such as proposing wider-case generalizations (empirical generalizations). It might be that additional or different conclusions can be drawn from the data. This report makes the reader aware of the evidence upon which conclusions were made and hopefully demonstrates the credibility of the research findings.

Relevance concerns the nature of the research activity. Firstly, is the research activity of interest to its audience? For the research to be of interest it must engage with relevant published work and be written in an appropriate style (Walford, 1998). This study draws upon relevant and recently published work and relates this to PGCE courses offered nationally under DfEE 4/98 or since September 2002, DfES 02/02. Consequently, the thesis should have relevance to contemporary issues in mentoring.

Finally, does the research develop or extend existing knowledge? However small, some contribution to existing knowledge should be made - the report should do more than just replicate what is already known.

Reliability is described as, “the precision or consistency of measurements”, by Frey and Mertens-Oishi (1995, p.25). E835 (1996) includes aspects of reliability under its validity section but this aspect may be better described as reliability. E835 emphasizes the procedures and quantities for data gathering i.e. was a suitable amount of evidence (data) collected via systematic and consistent techniques? The amount of evidence collected will, obviously reflect the nature of the research activity (quantitative / qualitative data) and the duration of the research process (how much time there was).

After identifying a broad scene of mentoring in the literature review narrower focal themes were established. Using the focal themes as a framework a sharp research focus was constructed by the addition of ten research questions (table 7.1). Table 9.10 shows how, for most questions, data was collected by more than one method. Table 9.10 shows detail of the data collection events and

amount of data collected. All the data collection instruments were piloted and reviewed by students, EdD tutor, work colleagues and myself. The versions used within the main study had been rigorously prepared in order to provide information that informed the key questions of the study, trialled and amended

Using a Grounded Theory approach for the collection and analysis of data

Bearing in mind the main purpose of this study as an *evaluation of trainees' perceptions* it seemed sensible to approach much of the research with an open mind that was not focussed on gathering specific evidence to 'test' hypotheses. Such traditional, *testing theory*, classical scientific approaches would have little value for the main thrust of this project. However, such an approach had value in describing some quantifiable parameters important to the context of this study.

An approach that was concerned with building theory would be more suitable for qualitative aspects of the work. The grounded theory approach, as Richardson (1996) suggests is typified by:

- (a) firstly collecting data associated with the field of study
- (b) secondly deriving constructs and laws from the data collected

The constructs and laws are established from the data the researcher collected, they are said to be "grounded" in the data.

Historical and methodological aspects of a grounded theory approach

Glaser and Strauss coined the term 'grounded theory' in 1967 during their investigation of the terminally ill (Richardson, 1996). The term grounded theory was chosen as it expressed the idea that theory is generated (or grounded in) an iterative process involving continual sampling and analysis of qualitative data. This was formulated at a time when the inadequacies of the

positivistic scientific approach to qualitative data were prominent. The grounded theory approach requires two processes:

(i) constant comparison

This is a process of continual sifting and comparing of the data throughout the lifetime of the research project. This activity sensitizes the researcher to the similarities and differences and complexities of the data relevant to a particular issue.

(ii) theoretical sampling

This is a process of using sampling techniques to elaborate on the data obtained. Unlike a quantitative approach it is not concerned with collecting multiple case or replica data but an approach that diversifies the data collected. In this way new information that may generate new theory is collected. Ultimately, theoretical sampling would be complete when theoretical saturation has occurred. Gall et al. (1996) acknowledge Glaser and Strauss (1967) in the use of this descriptor. Theoretical saturation occurs when no new or relevant data are emerging relevant to a particular issue.

Together the commitment of constant comparison and theoretical sampling stimulate an iterative process. This focuses the researcher on analysing what they actually observed rather than being preoccupied with verifying *predetermined* hypotheses.

I do not claim to have achieved a point of theoretical saturation within all aspects of this study. However, the approach of generating theory from the data and using multiple perspectives (e.g. questionnaire, interview, observation) for data collection on a specific issue demonstrate the commitment to a grounded theory approach.

The nature of Ethical Practice in Educational Research

It was important to consider ethical aspects and ensure that good ethical practice was followed throughout this study. Ethical issues needed to be considered prior to the construction of the research instruments in order that appropriate ethical practice was adopted for the study. The following section explores the nature of ethical practice in educational research and suggests guidelines for ethical practice that were used in this research project.

Eisner and Peshkin (1990) see ethical conduct as more than just avoiding placing subjects at risk. It is seen as a challenge of doing good. They admit that this puts researchers at odds with each otherabout the location of doing good in the conduct of research. They quote Soltis (1990):

Education is, at base, a moral enterprise. Education is ultimately about the formation of persons. It is about developing and contributing to the good life of individuals in society

(Soltis in Eisner and Peshkin, 1990, p.248)

What constitutes proper behaviour will vary dependent upon setting, roles and circumstances. Eisner and Peshkin pursue the notion of proper behaviour through the categorical imperative, citing Kant:

Act as if the maxim of thy act were to become by thy will a universal law of nature

(Kant in Eisner and Peshkin, 1990, p. 291)

The categorical imperative, often deemed a 'golden rule' of philosophical systems is very much like the dictum, "do unto others as you would have them do unto you". They continue by suggesting that if what you are doing would not be suitable for yourself, your spouse, your parents or your best friend then

it is probably not ethically correct. Eisner and Peshkin, writing in 1990 report that most ethical procedures had reflected and undergone development in quantitative research systems that operated in positivistic paradigms. They admit that a fresh approach, suitable for qualitative systems within constructivist paradigms will be useful.

Guidelines for Educational Research

The British Educational Research Association (BERA) adopted ethical guidelines for educational research at its Annual General Meeting in August 1992. They stated that:

all educational research should be conducted within an ethic of ;
respect for persons
respect for knowledge
respect for democratic values
respect for the quality of educational research

(BERA, 1992, p.1)

Bassey (1995) when presenting his guidelines on the ethics of social research has obviously adapted the BERA guidelines as he suggests three major ethical values:

respect for persons
respect for truth
respect for democratic values

(Bassey , 1995, p. 15)

The differences to the BERA guidelines are that respect for knowledge (BERA) is replaced by a requirement that the knowledge should be correct i.e. Bassey's respect for truth. Bassey omits the requirement of respect for the

quality of the educational research but he establishes this requirement elsewhere in his writing (Bassey 1995).

Gall et al. (1996) present ethical guidelines from their American perspective and report that the ethical standards of the American Educational Research Association (AERA) has set 45 standards under 6 major headers. The headers used by AERA are:

1. Responsibilities to the field – educational researchers should attempt to report their findings to all relevant stakeholders.
2. Research Populations - educational Institutions and the Public – educational researchers should be sensitive to the integrity of ongoing institutional activities and alert the institution to any disturbances caused by the research.
3. Intellectual Ownership – all those, regardless of status, who have made some substantive contribution to the generation of an intellectual product are entitled to be listed as authors.
4. Editing, Reviewing and Appraising Research – editors should insist that even unfavourable reviews be dispassionate and constructive. Authors have the right to know the grounds for the rejection of their work.
5. Sponsors, Policy Makers and other users of the research – educational researchers should not accept funds from sponsoring agencies that request multiple renderings of reports that would distort the results or mislead readers.
6. Students and student researchers – personal animosities or intellectual differences should not be used to place the student researcher in an intolerable position.

At first, by reading the sectional headers for BERA's and AERA's guidelines on ethical conduct in research, there appears to be a noticeable difference in

the two sets of recommendations. BERA's headers are succinct and all prefixed by respect. As such they convey a 'warm' message of courtesy and diplomacy. AERA's headers seem much more concerned with highlighting procedural mechanisms. They seem 'colder' even though they convey much more information than BERA's headers.

However, on reading the full recommendations, the guidelines are remarkably similar, even to identical wording in places, such as:

educational researchers should attempt to report all findings to all relevant stakeholders and so refrain from keeping secret or selectively communicating their findings

(BERA , 1992, p.1 and AERA cited in Gall et al., 1996, p.85)

BERA and AERA both published their ethical guidelines for educational research in 1992 so their remarkable similarity in detail must surely reflect researcher collaboration rather than parallel evolution.

Using BERA (1992), AERA (1992), Gall et al. (1996) and Bassey's (1995) work on ethical guidelines for educational work the following points seem especially relevant for my own work. The data collection, through questionnaires, observations, interviews and documents should include that:

- (i) respect is shown for people's dignity, through appropriate codes of conduct
- (ii) data is anonymised and treated with confidentiality
- (iii) contributions to all authors of substantive aspects of the research should be acknowledged
- (iv) fabrication, falsification or misinterpretation of evidence should be avoided
- (v) that research findings are reported to all relevant stakeholders and the findings should not be kept secret to or communicated only to selected groups

Bassey's three research ethics (op. cit.) can be used as a structure to demonstrate how ethical considerations were incorporated into the construction and deployment of the research instruments. I would add a fourth research ethic, *respect for human relations*, which appears in (i) above and is subsequently discussed.

Bassey (1995) says that data should be taken from people by recognizing their initial ownership of the data and done in such a way as to respect their dignity and privacy. He gives, as unethical examples, writing a report that reveals the identity of someone who hasn't given their permission or to quote from a private conversation without the permission of the speaker. Gall et al. (1996) suggest that where sample populations are chosen that the sample should be selected randomly. In this way researcher bias, or the possible loss of self-esteem by an individual not selected in the sample, would be avoided. They continue by discussing consent and state that subjects should be asked for consent and that the nature of the research and the subsequent use of the data explained to them. The Institutional Review Board in the United States requires that all participants receive a letter describing the nature of the research and that they sign and keep a copy of this letter when giving their consent to participate in the study. In terms of privacy and confidentiality of data subjects should be told at the outset who will have access to the data. There should be attempts to minimize the identity of participants, through, for example, anonymous questionnaire and coded responses. Oppenheim (1992) agrees that all survey data must be treated as confidential but clarifies this by suggesting that it is confidential in the sense that only the researchers have access to the data.

There also needs to be some risk assessment in order to balance the benefits of data collection and its value in the advancement of knowledge against any risk,

psychological or legal, that could be increased in the subjects by the data collection activity.

Bassey (1999) repeats his earlier statement (1995) of ethical guidelines as respect for democracy, truth and persons. He poses the dilemma that ethical values can clash and gives as an example a researcher's democratic right to investigate and publish findings as trustworthy clashing with some people insisting on privacy, to which they are entitled. At this point Bassey (1999) suggests, as unethical practice, the behaviour of many journalists who ignore the ethic of respect for persons.

Respect for truth

In order to achieve respect for truth systematic and careful records need to be kept and the fabrication or falsifying of data, to generate erroneous conclusions, is unacceptable. In principle another researcher should be able to use the same data to draw their own conclusions

Respect for democratic values

In a democratic society researchers can expect the freedom to investigate and ask questions. Researchers should be able to receive information and have the freedom to express their own ideas about it. People should have the right to criticise the ideas of others and to publish their research findings. Nevertheless these freedoms have to be balanced with the ethics of respect to persons and respect for truth.

Respect of human relations in research

Developing good human relations is an important aspect of ethical practice. Although research must be valuable and original it needs to encourage the greatest co-operation of the people and institutions being dealt with. Establishing good human relations is therefore, in terms of gaining access to undertake research and in terms of maintaining and developing research activities, vital. Aspects such as securing permission and co-operation,

building relationships with the clients and institutions, locating a site conducive for research work (interviews, tutorials) and pursuing and sustaining good relations were all important in the study. A polite, diplomatic, well organised, forgiving yet persistent approach is needed to ensure appropriate data can be collected.

Summary to methodology, grounded theory approach and ethical stance

In some situations either quantitative or qualitative approaches have a distinct value in educational research - *there is sometimes a best method to follow*. In other situations a fuller picture and clearer understanding might best be revealed through *the use of both approaches*. Enlightenment can also be provided through the collection of multiple source data on the issue via the process of triangulation. The quality of the research will be judged by its collection and reporting of valid, relevant and reliable data.

The subsequent writing within this chapter shows how the components of methodological style, triangulation, grounded theory approach and ethical practice were amalgamated to generate a secure and appropriate research methodology for this study. Bassey's (1990) summary guidelines for good research practice, shown in table 9.2, were also useful in guiding the methodology of this empirical study.

Table 9.2. A summary of good research practice

1. Any research inquiry must be conducted for some clearly defined purpose. It should not be a random amassing of data but must entail a planned attempt to arrive at answers to specific questions, problems or hypotheses.
2. When conducting an inquiry data should be collected and recorded systematically, so that, if necessary, it can be checked by others.

3. There should be a clear rationale of theory informing the way the data are analysed.
4. Researchers must critically examine their evidence to make sure that it is accurate, representative and reliable.
5. Researchers must be self-critical and should scrutinize their own assumptions, methods of inquiry and analysis, and ways of presenting their findings.
6. As the purpose of research is 'to tell someone something that they didn't know before', then researchers should aim to communicate their findings to a wider audience so that they can also benefit from the new knowledge.
7. Researchers should attempt to relate any new knowledge or understanding they gain to both their own personal theories and to published theories so that the former can be evaluated in terms of its wider conceptual and theoretical context.

(Bassey, 1990, in E621 Methodology Handbook, 1994, pp.8-9)

The construction and administration of the Research Instruments.

A pilot study (1999-2000) was used to trial a variety of investigative approaches and guide the structure of the main study (2000-2002). Three data collection instruments, questionnaire, interview and observation were used in the pilot study and are summarized in table 9.3 shown over the page.

Table 9.3. Summary of the research instruments used in the pilot study

Research instrument	Sample size	Date
Questionnaire	6 Science and 6 MFL students	Dec.1999
Interviews	2 Science and 2 MFL students (pair interviews)	Feb.2000
Observations	1 Science and 1 MFL student with their college and school mentors	Jan/Feb.2000

The main study 2000-2002 developed and incorporated these instruments as the principal data collection tools. In addition to these approaches I volunteered on behalf of the PGCE (sec) Programme Team, to undertake a specific piece of Action Research on mentoring during 2001. This was concerned with how a PGCE trainee's end of Teaching Practice Review was organised and conducted. Three people, the trainee, school and college mentors were involved. The college refers to this end of practice review as the Tri-Partite Review.

Incorporating ethical practice into the construction and use of the research instruments

Four ethical 'respects' for:

- persons
- truth
- democratic values
- human relations

were presented earlier as important aspects to consider.

Those for truth and democratic values can be dealt with generically as the principles were the same for all the research instruments. Ethical aspects of respect for persons and respect for human relations are shown specifically for each of the research instruments.

Respect for truth

Efforts were made to make all the data collected ‘transparent’. Where possible clear and concise compression of the data was undertaken in a logical, statistically appropriate and systematic fashion. Copies of the research instruments are lodged in appendices 2,3,6 and 7. The mechanisms of data collation are explained in the text of the results and their analyses chapter. All the summary evidence is shown from which conclusions on the findings have been drawn. The limitations of sample sizes on the confidence of claims and the limitations of drawing empirical generalizations from the theoretical inferences of this study are made explicit. The dissertation contains enough factual and contextual information for someone else to replicate the study.

Respect for democratic values

I did not receive any request, on ethical grounds, to modify or delete areas of investigation in this study. Neither did I receive any restrictions over the writing-up and publishing of the report’s findings. At the time of writing eleven formal presentations (five to the directly involved parties and six to a wider, including National audiences) on the study have been given and I have enjoyed democratic freedom in expression of this work. I have endeavoured to balance/preserve the ethics of respect for people (confidential and anonymous data) with the freedom to broadcast information. The overarching purpose of this work being that the findings could be use to improve the quality and experiences of PGCE trainees in SMC and on a wider scale provide benefit to others concerned with ITT.

Questionnaires

The key reasons for the use of questionnaires were:

- they seek information from the whole cohort. The data should be reliable.

- through the closed response answers they provide quantitative, ‘hard’ data to provide specific facts
- through the open response answers they provide qualitative, ‘rich’ data.
- they are expected and respected as a routine data collection exercise in SMC and the Open University’s Faculties of Education
- a number of key personnel were involved in their construction (this increased the perceived value and acceptability of the data),
- they contribute data to a useful piece of secondary age-phase educational research,
- they provide the trainee-based information that helps frame questions for the semi-structured interviews and observations.

Informed by a number of texts on the use of questionnaires (Gall et al., 1996; Richardson, 1996; Silverman, 1997; Walford, 1991) a number of ‘structural issues’ were considered before constructing the first draft of the questionnaire. Table 9.4 summarises these points.

Table 9.4. Structural aspects considered prior to drafting the questionnaire

Preliminary points

What are you trying to find out?

How will you administer the questionnaire?

How will you persuade people to respond?

Will the questionnaire be anonymous?

When will the questionnaire be administered?

How are you going to process and analyse the information collected?

Have you made arrangements to pilot your questionnaire?

Types of question to be used

1. Open and closed questions

Open fill box (e.g. date of birth) and ranges (e.g. 18-25years old)

2. Closed -ended questions (tick boxes)

single category (tick one from a list)

multiple category (tick all that apply)

Likert-style ratings (merits of 4 point or 5 point scales, such as, strongly agree - strongly disagree gradations)

3. Facts and opinions - what is the value of attitude scales?

4. Wording problems in questions – how to avoid client confusion

Ambiguous questions

Negative questions

Double-barreled questions

Over-precise questions

Hypothetical questions

Unanswerable questions

Leading questions

Personal/embarrassing/insulting questions

Depressing questions

Boring questions

Technical questions

The questionnaires covered a wider territory than that subsequently defined by the four focal themes, divided into the ten key questions for investigation in this study. In order to gather appropriate data for the areas being investigated the questionnaire design contained specific target questions, in-line with Bassey's (1990) guidelines for good research practice and Mackinnon's (1987) clue structure approach. In addition to collecting suitably targeted data the

balance of quantitative and qualitative methodologies required the questionnaire to contain both closed and open response-style questions. The production of the questionnaire was helped through consultation with my Open University tutors, with colleagues and from the comments PGCE trainees had made to the version used in the pilot study. The main study (2000-2001) required two versions of the questionnaire to be produced. These documents were very similar but one version was needed for the collection of early teaching experience data and the other for late teaching experience data.

Table 9.5 shows the production, redrafting exercises and piloting of the questionnaire along with its use in the main study. Draft 3, which was used at the early teaching stage in the main study, is included as an example of the questionnaire (appendix 2).

Table 9.5. The staged production of the questionnaire

Draft version	Date	Comment
1 (Pilot study)	November 1999	Circulated to OU tutor and 10 colleagues for comment
2 (Pilot study)	December 1999	Given to 12 students (6 Sci and 6 MFL) as pilot. Qu.23 invited comment from students on the structure and content of the questionnaire
3 (Main Study)	June 2000	Questionnaire refined for use in the main study in Nov. – Dec. 2000 (Early Teaching data).
4 (Main study)	May 2001	Questionnaire has minor changes to suit use in June–July (End of Course data)

The questionnaire enabled the quantitative comparison of certain aspects of numerical data (such as ages, gender balance, time spent preparing and evaluating lessons etc.). Some of this data would be subjected to an unrelated 't' test this being an appropriate, parametric, inferential statistical test (E910 1999; Druce and Edmondson 1996).

Incorporating ethical practice into the questionnaire

Respect for persons

The first page of the questionnaire document (appendix 2) explained the purposes of the data collection and its use, for example, to illuminate and improve the PGCE course. There were no issues of sample selection bias as whole cohorts were used. Trainees were given the option of entering their name and school details – which would be used only, *as their consent*, for follow-up interview purposes. The word 'please' preceded most requests for information. Students were thanked for completing the questionnaire. The data was treated anonymously.

Respect for human relations

My EdD tutors and ten colleagues were involved in proofreading and editing the draft questionnaire. A second draft was then produced for the pilot study (1999) in which the student respondents were asked to comment on the structure and content of the document (Qu.23, draft 2). A third draft was produced for the main study in 2000. Further consultations resulted in minor modifications for the final questionnaire (draft 4) used in 2001.

Although these processes align with the respect for truth ethic the manner in which regular contact was maintained reflects the ethic of human relations. Regular contact, in an enthusiastic and appreciative manner, followed up by thanking respondents for their contributions, were used to sustain good human relations.

Interviews

The key reasons for using interviews were that:

- trainees could explore their interpretation of aspects of mentoring
- trainees could enrich earlier (questionnaire) responses and explain them in more detail
- trainees could provide other insights and values through what they say ... and don't say
- the comparison of two trainees, each exposed to the same school and its mentoring processes, could be investigated more specifically than by questionnaire
- meanings and feelings should also be communicated to enrich the data
- the departmental secretary would record key points of verbal and non-verbal communication against the interview proforma, whilst I spoke with the trainees
- an interviewer and scribe (myself and secretary) plus 2 interviewees (PGCE trainees) 'balanced' the personnel in the meeting.

Kvale (1996), when writing about qualitative research, describes interviews as, "conversations where the outcome is a co-production of the interviewer and the subject", (Kvale, 1996, p.xvii) and continues, "If you want to know how people understand their life, why not talk to them?", (Kvale, 1996, p.1)

Frey and Mertens-Oishi (1995) write from the positivist perspective and appear to see the purpose of an interview as a streamlined process that produces as close as possible a mirror of reality. They say:

(an interview) ...is a directed conversation, the purpose of which is to gather information by means of administering the same set of questions in a consistent way to all respondents

(Frey and Mertens-Oishi , 1995, p.1)

I would agree that rigour and consistency are important but would question their use of ‘directed conversation’ and ‘administering the same set of questions’. For qualitative purposes interviews would be better described as ‘managed conversations’ and ‘explorations of the same set of questions’.

Frey and Mertens-Oishi (1995) reflect true positivist style with this description of purpose for an interview:

The ultimate goal of the (interview) survey is to produce quantifiable measures of variables that can be statistically analysed to generate reliable observations

(Frey and Mertens-Oishi, 1995, p.2)

Such a description seems more geared to the production of survey data for publication rather than engaging with the deeper meaning and understanding of clients. Kvale (1996) produces a useful analogy for an interviewer operating in either a quantitative or qualitative paradigm. The quantitative, positivistic approach would be that of a miner who unearths valuable information as facts to be quantified. These would constitute the ‘gold nuggets’ of essential meaning. The interviewer strips away key information without influencing the subject and the facts remain constant and are treated objectively. The value of the end product is in its degree of purity. In contrast the qualitative, post-modern constructivist approach would be that of a traveller on a journey which leads to a tale to be told on returning home. The interviewer wanders through the landscape, seeks specific sites, engages in conversation (Latin = converse, wanders together with) and may, deliberately, pursue certain routes. What is recorded is a story.

Thus interviewing, although a time-consuming process, offers:

- Enhanced respondent participation
- Guiding of the respondent
- Answering of respondent’s questions
- Clarifying issues
- Neutral territory / convenient time

Frey and Mertens-Oishi (1995) suggest key aspects to consider in the construction and use of an interview survey, which are summarised in table 9.6.

Table 9.6. Aspects to consider when undertaking an interview survey

Aspect of interview	Points to consider
Preparation of Interview statements	Identify person in full Identify sponsor (e.g. O.U. / SMC) Explain why request is being made State any important conditions e.g. confidentiality level, voluntary nature, approximate length of interview. Give benefits of participation.
Interviewer effects	Behaviour of interviewer Interview interjections Tone of voice Body language Re-phrasing of text to respondent Location – neutral and pleasant room
Ability to probe – how to get more information from interviewee	Nodding, mmm! Could you tell me more? What makes you say that? Etc.

Questions	Number of questions Simple and complex questions Sensitive questions Nature of questions – to elicit simple or extended response May evoke a ‘socially desirable’ response Length of interview
-----------	---

Construction of interview proforma

A semi-structured interview proforma was produced for the pilot study in January 2000. A number of factors were seen as relevant:

- (i) the nature of the information received from some of the questions in the trainee questionnaires suggested that further investigation at interview could be valuable. This would allow for discussion and richer, qualitative, data collection. The interview findings could also be used to triangulate with the equivalent data obtained via the questionnaire surveys.
- (ii) advice from colleagues, including feedback from my OU tutor and information from published work over the interview format needed to be borne in mind.
- (iii) the qualitative data to be collected needed the style and structure of the interview to be ‘sympathetic’ to this methodological paradigm i.e. fairly open and simple to allow freedom for interviewee to develop their answers. Attempts were made to constrain the number of questions, to keep them brief and phrased, where possible, in plain English. The wish to ground theory from the trainee-generated data was important and therefore clear record keeping of trainee responses was needed.

(iv) Bassey's (1990) guidelines for good research practice and Mackinnon's (1987) clue structure organisation helped ensure that suitable questions were asked. This would ease future de-coding of the data in relation to the focus of this study (table 7.1)

The use of a minuting secretary (Science departmental secretary) rather than an audiocassette recorder to record data was selected. This was done for three reasons. Firstly to record summary / transcripts of conversations at the point the data was being generated. This enabled any written comments to reflect the context of the interview environment – something that cannot be easily recreated after the event. The departmental secretary was skilled and well experienced in the role of minuting secretary so this use of expertise seemed to add strength, with some objectivity, to the quality of the data being recorded. Secondly it 'balanced' the personnel in the interview room. There were two trainees and two interviewers (myself and a female secretary). It was hoped that this would produce a conducive personnel environment. Two trainees were chosen from the same Teaching Practice Placement, as the value of trainee pair placements was one of the areas under investigation. As I was interested in the value of such pair student placements it seemed appropriate to interview both students to see how they, together, responded to the interview questions.

Thirdly this procedure builds on a similar interview structure I had used in 1995 as part of a Master's degree in Education dissertation. This earlier work had shown value in this strategy. Part of the current study was to make comparisons (on reflective practice) with my earlier work and replication of interview styles seemed appropriate.

The interviews were designed to last for around 45 mins. This had been considered the maximum time for such interviews (PGCE Programme Director, Nov.'99 and PGCE students, Pilot Study, 2000). Frey and Mertens-Oishi (1995) suggest 60-90 minutes for in-depth interviews but this time was

considered too great and would have caused additional problems with student availability.

Figure 9.2 summarizes the setting for the interviews. A quiet, ‘neutral ‘ but relaxed environment was selected, where disruptions would be avoided.

Figure 9.2. The setting for the interviews

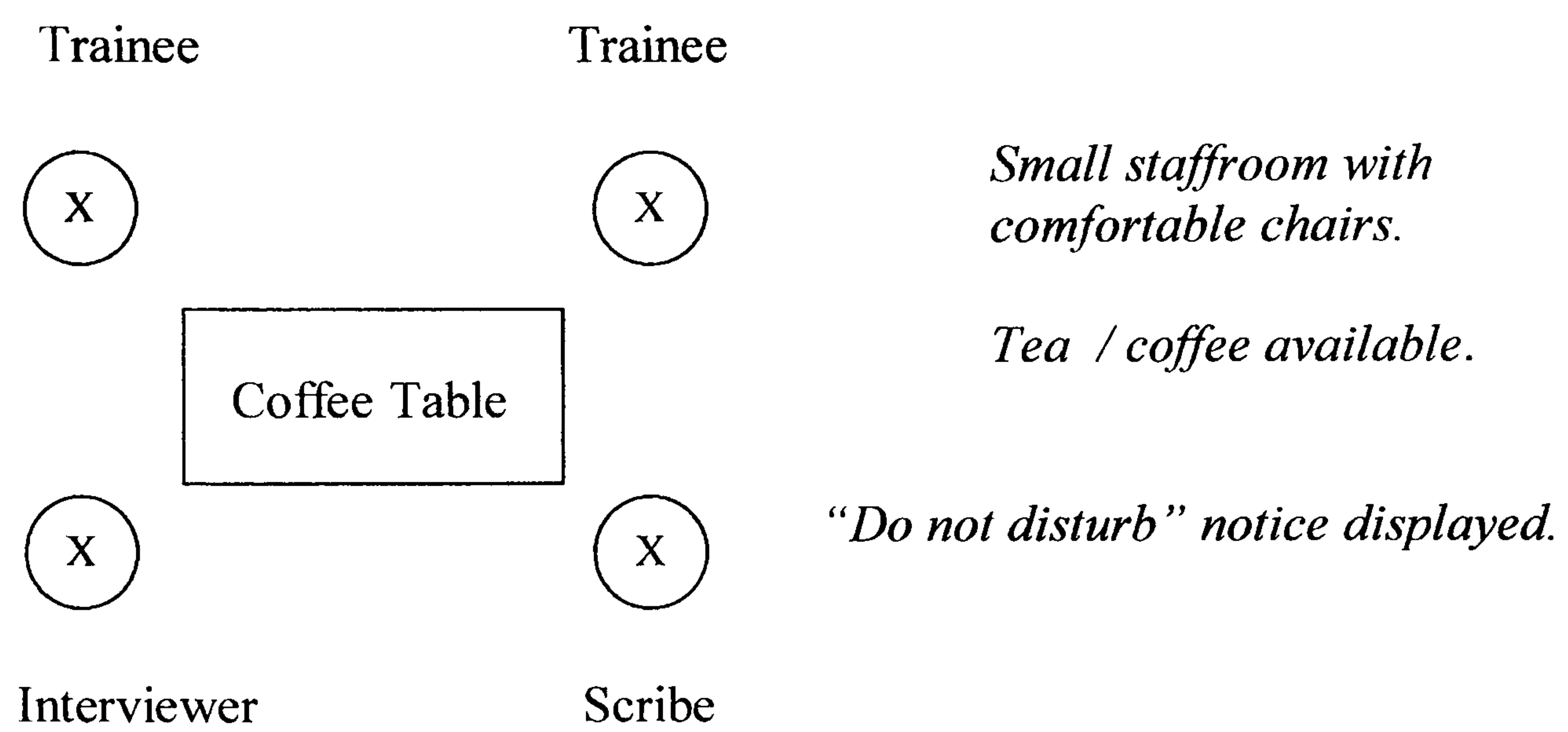


Table 9.7. The production of the interview proforma and the undertaking of interviews

Draft version	Date	Comment
1 (Pilot study)	January 2000	Interview proforma used in the pilot study. In qu.13 interviewees were asked about the environment, length and structure of the interview
2 (Main study)	January 2001	Modified proforma (appendix 3) produced for use in interviews (Feb. / March 2001) at the end of the first Teaching Practice.
3 (Main study)	June 2001	Minor modifications to draft 2 proforma produced for use in interviews (June / July 2001) near to the end of the PGCE course.

A copy of the interview proforma used in the main study (draft 2) is included as appendix 3. The version of the proforma used in the actual interviews was modified to include more space between the questions for noting student responses and behaviours. The trainees to be interviewed had given their permission for this on the questionnaire. I sent memos, suggesting a variety of dates and times to them. These were followed-up to confirm the appointment. The interviews took place during a college-based part of the PGCE course and the relevant PGCE Course Leaders were informed of these interviews.

Incorporating ethical practice into the interviews

Respect for persons

Only trainees who gave their consent in the questionnaire were invited to interview. The sample for interview (19-23% of cohort) were selected on the basis of consent and their paired teaching placement, the latter being a key area for investigation. No bias was intentionally created. The trainees each received a personalised letter inviting them to interview (appendix 4) and explaining the purpose of the interview. Trainees were asked to confirm their attendance. The arrangement of the room and personnel involved in the interview had been selected to create a relaxed, conducive environment as shown in figure 9.2. Prior to the interview an introduction (appendix 3) was read to the trainees thanking them for attending and explaining the purpose and procedure of the interview. Trainees were told that all data would be treated anonymously.

Respect for human relations

My EdD tutors and ten colleagues were involved in proofreading and editing the initial structure of the interview proforma. A draft was then produced for the pilot study (1999). Trainees were asked to comment on the environment and structure of the interview. A second draft was produced for the main study in 2000. Further consultations resulted in minor modifications for the final interview proforma (draft 3) used in 2001.

Thanks were offered to all at the end of the interview and as with the questionnaire survey a positive human relations environment was created.

Observations

The structure for observation was based on a number of factors:

- the sharp focus of investigation for this project
- cognitive and affective aspects of the mentor-mentee meeting i.e. the content and organization of the meeting (cognitive) and the influences upon this (affective) such as time of day, room, seating arrangement, privacy
- the verbal responses and nature of communication between parties,
- eye contact and other body language indicators may be useful here
- time spent discussing a trainee's planning, delivery and evaluation of lessons (a key focus of the research)
- trainee responses to some responses from the questionnaire.
- the documents needed to be completed for the Tri-Partite Review (establishing progress and targets for the student in discussion with a college tutor and school mentor)

The purpose of the observation was to see whether trainees emphasised and /or valued specific aspects of mentoring when interacting with their college mentor and school mentors. Observations covered the period before, during and after one of the student's solo-teaching lessons. The student, College Mentor and Subject Mentor were present. All observations took place near to the end of a trainee's School A Teaching Practice (Jan./Feb. 2001) and were followed by an end of Teaching Practice Review (Tri-Partite Review).

Two weeks prior to observation a letter (appendix 5) was sent to the following people:

- (i) PGCE Science and MFL Course Leaders

(ii) School Professional and Subject Mentors

(iii) PGCE trainees to be observed

The letter provided information, requested permission and co-operation and was also sent out of politeness to the concerned parties.

In the main study eight further observations, similar to those of the pilot study, were conducted. A copy of the observational proforma used in the main study is enclosed as appendix 6.

Incorporating ethical practice into the observations

Respect for persons

Consent was needed from college tutors, school professional and subject mentors as well as from the trainees observed. These were all the parties involved with the observational / student review process. Four weeks prior to the observations conversations, telephone calls or e-mails were used to negotiate consent with the college tutor to undertake observation. Two weeks prior to observation personalised letters were sent to the school mentors and trainees of the designated schools (appendix 5). The letter introduced me, described the purpose and nature of the observation, asked for consent, and stated that confidentiality and anonymity would be ensured. The observational sample was small and was dictated by the college tutor and my availability in a busy working programme. No intentional bias was introduced.

Respect for human relations

The wording and personalised nature of my introductory letter that requested consent (appendix 5) began this process.

Punctuality, politeness and low-profile qualities were maintained to ensure a pleasant but unobtrusive presence during the school visit. Thanks were offered to all at the end of the observation.

The value of the observational study in this research had always been uncertain, as mentioned earlier. Taking into account the value and quality of the data gathered along with organisational and time issues it seemed sensible not to repeat this observational study at the end of the course. The observations seemed to add little new data to this study. A point of theoretical saturation (Richardson 1996) could have been reached.

The Tri-Partite Review (end of Teaching Practice Review)

In February 2001 I volunteered on behalf of the PGCE (sec) Programme Team to gather and present information relating to a trainee's end of teaching practice review meeting (The Tri-Partite Review). The team were keen that I might also suggest to PGCE (sec) tutors (N = 28) how to manage the review meeting more effectively.

The focus of my research was not the same as the specific task requested. Nevertheless I decided to investigate aspects of the Tri-Partite Review process, which was undertaken near to the end of the first Teaching Practice (Jan/Feb 2001). The findings of this 'action research' (Kemmis, 1988) could provide useful data for purposes of triangulation in my own research and also be of benefit to the PGCE (sec) programme. The most important points seemed to be to:

- (i) collect appropriate data (quality and quantity) about the Tri-Partite Review
- (ii) collect opinions from all three parties involved with the Tri-Partite Review
- (iii) gather the data over a short time-scale in order that the findings could inform the next Tri-Partite Review in June 2001.

I produced a draft list of questions about the Tri-Partite Review and this was circulated to five Science PGCE (sec) tutors for discussion. I responded to the

comments and a list of twelve questions was produced (appendix 7). This list of questions would be given to trainees, Subject Mentors and college tutors.

The sample population and data collection

Selection of sample population

The populations chosen, for the investigation of the research questions, were PGCE (sec) Science and Modern Foreign Languages trainees. As my full-time work is with Science PGCE trainees this subject was an obvious choice. I would be able to compare some of the findings, on reflective practice, to research I had undertaken in 1995 and 1997. I was also interested to see if trainees from another subject would respond differently to their Science peers with respect to their perceptions of mentoring. I chose Modern Foreign Languages trainees as the different nature of their subject matter could influence trainees' teaching and learning styles and affect their perceptions of mentoring. The cohort sizes were both substantial and similar (September 2000, Nsci = 53, Nmfl = 47). Additionally the college tutors in both subjects had worked at the college for several years and therefore had established working practices within their subject area.

For the purposes of the questionnaire surveys I selected entire trainee populations. The response rate, to the questionnaires, was anticipated to be very high due to my control and persistence in retrieving information. This was above the 70-80% level that Cohen and Manion (1989) and Frey and Mertens-Oishi (1995) describe as a response rate, "where one should feel comfortable with analyses based on the data", (Frey and Mertens-Oishi, 1995, p.30).

At the outset of the main study (September 2000) there were 100 trainees (53 Science and 47 MFL) enrolled onto Science and MFL PGCE courses at SMC.

The interviews, due to time constraints, involved sampling at around 20% of the population. A key question being asked in this study was the effect that the paired teaching practice placement had on trainees' perceptions of mentoring. To this end the selection of trainees to be interviewed was directed at teaching practice pairs in school departments.

Observational data took a long time to collect for just one student. Typically the journey time to the school and observational periods of over half a school day meant that each trainee could take one day's time for observational data collection. I had decided to observe as many of my college colleagues mentoring trainees in a school-based setting as possible. I was able to observe six different college tutors in as many different schools. Time and personnel issues directed the selection of the observational sample, which reflected just 9% of the population.

Data collection

The times for data collection were set by the need to gather data at early and late teaching stages in the PGCE course and by the structure of the 36 week PGCE (sec) course itself, which is delivered in different phases (appendix 1). In addition, the trainees' and my own availability to be 'free' to undertake the research was an influential factor. The consequences of these constraints meant that *early teaching data was collected by:*

- questionnaire in late November to December 2000 within college. This was at a point when trainees had just begun their solo teaching and were placed 'in school' for four days a week
- observation in late January to early February 2001 in school, near to the end of the first Teaching Practice
- interview in February to March 2001 in college, at a point during a college-based phase between Teaching Practices.

Late teaching data were collected by questionnaire and interview during the last two weeks of the PGCE course in late June to July 2001 when the trainees had returned to college.

Data for the Tri-Partite Review investigation was collected between February and April 2001, in college, from trainees, Subject Mentors and college tutors.

Table 9.8 presents statistical data on the student cohorts involved in this project

Table 9.8. PGCE (sec) Science and Modern Foreign Languages trainee statistics 2000 – 2001

COHORT FEATURE	SCIENCE	MODERN FOREIGN LANGUAGES	OVERALL
Population at entry to course in Sept. 2000	53	47 (30 Lancaster based) (17 Carlisle based)	100
Population at end of course in July 2001	43	40 (26 Lancaster based) (14 Carlisle based)	83
% completion	81	85	83
% Male (Sept. 2000)	40	25	33
% Female (Sept. 2000)	60	75	67
Mean age male at start of course (mean +/- SD yrs)	28.1 +/- 4.9	29.5 +/- 10.8	28.4 +/- 6.6
Mean age female at start of course (mean +/- SD yrs)	26.6 +/- 6.0	25.1 +/- 2.4	25.8 +/- 4.8
Mean age both sexes at start of course (mean +/- SD yrs)	26.7 +/- 5.6	26.2 +/- 5.8	26.5 +/- 5.1

Points of interest from table 1 data:

1. The two populations were well matched in that both had substantial and similar cohort sizes with comparable student completion rates.
2. The gender balance of both courses was in favour of females and this was especially marked in MFL. In Science the gender imbalance resulted from the larger number of Biology students (over half the cohort) which was a female dominated course.
3. In both courses males tended to be older than females. This gender age difference was especially marked in MFL. In MFL the lowest mean age and small standard deviation was produced by female trainees who were virtually all in their twenties.

The sub-populations were too small for inferential statistical testing of age. Clearly the age profiles within each subject were similar though. When both subjects were combined an unrelated 't' test showed, at the 5% level, that male trainees were significantly older than female trainees. Such subject, age and gender differences could be worthy of further investigation, as these factors may be influential on trainees' perceptions of mentoring.

Table 9.9, over the page, presents a summary of the data collection events and sample sizes in the study

Table 9.9. Summary of the data collection events and sample sizes in the study

DATE	RESEARCH INSTRUMENT	SAMPLE SIZE	% COHORT
28/11/00 Science 12/00 – 1/01 MFL	Questionnaire Completed in a tutorial session in college (Early Teaching)	77 (48 Sci + 29 MFL)	81
Jan.- Feb. 2001	Observation Undertaken in school (near end of 1 st TP)	8	9
Feb. – Mar. 2001	Interviews Undertaken in college (before start of 2 nd TP)	20	23
7 th Feb. 2001	Structured discussion (Science Subject Mentors at Training Day in college)	44	85
Feb. – April 2001	Questionnaire Via staff pigeon holes (college tutors)	23	81
Feb. 2001	Structured discussion (Science trainees in tutorial groups)	45	94
Late June – July 2001	Questionnaire Completed in a tutorial session in college (end of course)	66 (35 Sci + 31 MFL)	80
Late June – July 2001	Interviews Undertaken in college (end of course)	16	19

Triangulation has been identified as a potentially useful approach to data collection in this study. Many of the data collection events were consequently designed to allow for a triangulation studies with the ten key questions for investigation usually drawing evidence from multiple sources. The extent of triangulated data collection against the key research questions for investigation is shown in table 9.10.

Table 9.10. The source of evidence collected to illuminate the key research questions of the study

Key question	Source of data to provide information			
	Questionnaire	Interviews	Observations	T.P. Rev.
What is mentoring?	Qu.2,3,4 [Early,E] Qu.2,3 (Late,L)	Qu.1 [E + L]	9,11,12,15,16	
Mentor qualities	Qu.21(a – e) [E] Qu.24 (a - e) [L]	Qu.7 [E + L]	5,7,9	
Use and value of teaching strategies	Qu.5 – 15 [E] Qu.8 – 18 [L]	Qu.4,5,6 [E+L]		
The value of paired teaching placements		Qu.2 [E] Qu.3 [L]		
Perceptions on the Tri-Partite Review			Observations focused on the TPR	TPR triangulation data
Students action and values on reflective practice	Qu.5a,7b,15b,16,19c,20,21a-e [E] Qu.8a,10b,18b,19,20,22c,24a-e [L]	Qu.9 [E + L]	3,4,13	
The influence of time and mentor support on reflection	Qu.13c,14,15,18 [E] Qu.16c,17,18,21 [L]	Qu.7,10 [E+L]	16	

Student perceptions of professional development needs	Qu.5,6,7 [L]			
Changes from early to late teaching	Qu. 5,6,7 [L] Qu. 21,22,23,24 [E + L]	Qu.2,9 [L]		

Researcher Influences on data collection

In all aspects of the data collection I tried to minimise the influence of the researcher(s). Aspects of anonymity and confidentiality of data, of consent and establishing a conducive environment for data collection were described in the construction of the research instruments. Researcher influence cannot be ignored however as it can never be totally eliminated. For some trainees I gathered research data alongside my main role as a college tutor on the PGCE (sec) Science course at SMC. I was also seen by these trainees as being involved in their teaching, supervision and assessment. Other college tutors were involved in the administration of questionnaires and this created another college tutor influence over which I had little control. For example would my colleagues walk around the room, looking at questionnaire comments, as trainees were completing the documents? Would trainees think they might look at their comments and make judgements on the trainee after the questionnaires had been collected? Even though I had spoken to all my colleagues and provided them with written guidance on questionnaire administration there could still be differences in managing this task. In the interviews would the formalisation of discussion by the secretary's notes inhibit or skew the trainees' responses? In the observations, a worrying time for trainees anyway, would my presence as an additional observer and note-taker distort the events being observed? Sensitive to these factors I believe that

all reasonable measures to minimise researcher influence were taken and that interactions were conducted in an appropriate ethical setting as described earlier.

I had thought that researcher influence would be at its lowest for the end-of-course data collection events. These questionnaires and interviews were conducted in the last two weeks of the course at a point when the trainees knew they had been successful. This removal of the worries of assessment and the impact of an assessor would, I thought, allow trainees to be at their most open. Interestingly I was unable to see any evidence that suggested the trainees' responses had been inhibited or influenced in the earlier data collection events. On the basis of the similarities in response style it seems fair to claim that researcher influence was not noticeably different in the main two phases of data collection.

Establishing nationwide links and engaging in discussion about related mentoring research

In an attempt to gain as much up to date information on trainees' perceptions of mentoring as available I wrote to all PGCE Science and MFL Course Leaders in Teacher Training Institutions in England. In order to manage the administrative task, yet contact institutions reflecting the majority of trainees, I sent letters to ITT providers where more than 15 trainees were following Science or MFL PGCE courses. This meant that 101 letters were posted (May 2001). A copy of the letter, which requests mentoring information, is included as appendix 12. Forty responses to the postal request were received of which fifteen provided some information relevant to this study. Six of these 'positive' responses have resulted in further discussion by telephone, e-mail or meetings at conferences. Most of this information remains unpublished, some has been published and some has been presented as part of an MA or EdD thesis (September 2001). The process of continually updating the literature in

this field means that information published from 2000 onwards would have been read after the practical work of this thesis had begun and could not be used to inform my investigative approach to the research.

Summary

This chapter began by restating the focus for this study on specific aspects of trainees' perceptions of mentoring. This had developed from ideas in a pilot study (1999-2000), from additional points of my own interest, from recommendations by my EdD tutor and, 'opportunistically', through a piece of action research (Tri-Partite Review study).

Following a discussion about the value of quantitative and qualitative research methods in educational research a rationale for the selection of a mixed paradigm approach in this study was presented. The quantitative data could give factual evidence representative of the entire science and MFL trainee cohorts (100 trainees at start of course). In some cases these data would supply information that was previously unknown. The qualitative approach to data collection and analysis followed a grounded theory approach with meaning being constructed from the data collected in the focal areas.

The nature and place of ethical practice in educational research was explored and this ensured appropriate ethical practice was followed in the construction and use of the research instruments.

In-line with the need to follow a grounded theory approach, which would triangulate and strive for the theoretical saturation of data questionnaire, interview and observational research instruments were constructed. All of these research tools had been discussed with a wide variety of relevant personnel. They had all been piloted and redrafted incorporating feedback from the trainees who had trialled the items.

The sample population for the main study was Science and MFL PGCE students of the 2000-2001 session. Questionnaire data was collected at early and late course stages with returns in excess of 80% of the cohort. This is considered to be reliable data. Interviews were undertaken with sample

populations in a novel, 2 interviewers plus 2 trainees, structure which I had used previously in Master's level research in 1995. Observations were used once in the main study and not repeated due to the limitation to the extra data being provided by this approach. A piece of action research into mentoring aspects of an end of Teaching Practice Review meeting enabled data from trainees, school mentors and college tutors to be gathered in relation to a specified list of points. Finally a means of establishing nationwide links with contemporary related research was achieved through a letter sent to ITT providers. The responses gave up-to-date information, which would be used to discuss the findings of this study in a wider context.

In the next chapter the results and analyses of the various investigations are presented. These are put forward against the four themes for inquiry in this study.

10. Results and their analyses

This chapter begins by explaining how the data from this research were organised. Summary data are then presented in response to the four themes and key questions for investigation in the study (table 7.1). An analysis of the findings is presented for each of the research questions thereby providing greater knowledge and understanding of trainees' perceptions of mentoring. Bearing in mind the variety of research instruments used and the quantity of data collected such a structure helps to establish the key knowledge and understanding to be gained from the study. As Elliott (1934) says:

where is the understanding we have lost in knowledge? Where
is the knowledge we have lost in information?"

(Elliot, T.S., 1934, in Denzin and Lincoln, 1994, p.161)

Procedures used to summarise the results

Questionnaires

Questionnaire data had been collected from Science and MFL trainees, in college, during their early teaching (November - December 2000, N = 77) and close to the end of the PGCE course (June – July 2001, N = 66). Consequently four summaries of the questionnaire data were compiled i.e. early and late course data for each subject.

In the closed questions an arithmetic mean was calculated for the five-point, Likert-style, responses with the mode being shown afterwards, enclosed in brackets. An example of this style would be 2.4 (3), where 2.4 is the arithmetic mean and (3) the mode.

The key for the numerical scoring of such responses was:

- Key :* 1 = very important or helpful
2 = fairly important or helpful
3 = OK
4 = of little importance or help
5 = not important or helpful at all

In the open questions there was a need to rationalise the sheer quantity of data in order to help key information to be seen more easily. Only those responses that were made on at least two occasions are presented. The frequency of response being indicated by the number, enclosed in brackets, which follows the statement. The responses to the open questions were presented in rank order. Full summary records of all the open responses made by the trainees have been retained for reference. In order to eliminate the need to cross-reference the original statements presented in the research instruments (questionnaires, observation proforma, interviews and Tri-Partite Review) with their responses both ‘questions’ and responses are presented together. ‘Questions’ are shown in normal print with their summary responses in bold print. An example of the procedure for summarising the questionnaire data is shown in appendix 8.

Observations

Observations took place near to the end of the trainees’ first teaching practice, in school, at the time of their end of practice review (January – February 2001). Due to the small sample size ($N = 8$) and the focus of this study it seemed appropriate to present a single summary of student observations rather than provide separate subject treatment. An example of the procedure for summarising the observational results is shown in appendix 9.

Interviews

Interview data were collected from pairs of trainees, in college, at the end of their first Teaching Practice (February – March 2001) and near to the end of

the PGCE course (June – July 2001). Due to the focus of this study and smaller sample sizes it seemed inappropriate to present separate summaries of Science and MFL trainees' responses as had been done with the, whole cohort, questionnaire survey. Consequently two summaries of the interview data were made, one for the early teaching experiences (N = 20) and one for the end of course experiences (N = 16). An example of the procedure for summarising the interview results is shown in appendix 10.

Tri-Partite Review

This piece of action research involved the collection of data, in college, in response to twelve questions. Data was collected (February - April 2001) via:

- (i) tutorial group (4 groups) discussion with a total of 45 PGCE Science trainees
- (ii) small group discussion with 44 Science Subject Mentors
- (iii) questionnaire with 23 PGCE college tutors / managers

The data was collected with respect to the Teaching Practice Review that occurred at the end of the trainees' first teaching practice. An example of the procedure for summarising this Tri-Partite Review data is shown in appendix 11.

A great deal of data was collected for this study. Changes in the research focus, the variety of research instruments used (some on multiple occasions), the involvement of trainees from two different subjects as well as the addition of the Tri-Partite Review investigation were the causes for such data expansion. In order to rationalise and be suitably selective of the data a sharp focus of investigation was established. This focus, structured by four research themes and subdivided into ten questions for investigation has already been discussed along with its corresponding data collected through the research instruments (table 7.1). The use of key questions that targeted data collection.

along with multiple methods of inquiry to triangulate data, generated findings that helped create better explanations and understandings of trainees’ perceptions of mentoring. The following summary and analysis of the results responds to this structured inquiry framework.

Summary of results and their analyses

A. Mentoring

Qu.(i) What does mentoring mean to trainees?

Data was provided through questionnaire and interview.

Trainees were asked, in the questionnaires, to describe mentoring and its purposes within the PGCE programme. These were open questions inviting comment and the most frequent responses are summarised in table 10.1.

Table 10.1. Trainees’ descriptions of mentoring and its purposes in the PGCE programme (questionnaire surveys).

PGCE trainees	Most frequent responses
Science	Support (12) Advice (9) Help (7) Encouragement (6) Guidance (5) Someone to talk to (5) Constructive criticism (4)
Modern Foreign Languages	Support (14) (Positive) feedback (12) Advice (11) Help (9) Guidance (8)

	Help with lesson planning (5) Checking you're OK/ emotional support (4) Encouragement (4) Constructive criticism (4)
--	---

The responses of Science and MFL trainees on the purposes of mentoring in the PGCE programme were extremely similar. It seemed appropriate to draw together this separate subject data and construct a ranked list of trainees' perceptions of mentoring. During the interviews trainees were asked to give their understanding of the term mentoring and these interview responses have been set aside those from the questionnaire in table 10.2.

Table 10.2. Trainees' ranked perceptions of mentoring and its purposes in the PGCE programme.

Questionnaires (N = 143)	Interviews (N = 36)
Support (26)	Guidance (6)
Advice (20)	Help when needed (6)
Help (16)	Support (5)
Guidance (13)	Constructive criticism (3)
Encouragement (10)	Someone to talk to (2)
Constructive criticism (8)	Security/ a crook to lean on (2)
Someone to talk to (5)	Checking you're OK (4)

Clearly very similar responses in trainees' perceptions of mentoring were produced through the questionnaire and interview surveys. There were some variations in the relative frequency of comments but every comment made at interview was also raised in the questionnaire. By taking both sets of data into account and looking at the most important purposes of mentoring for PGCE trainees the following description can be constructed:

PGCE trainees think mentoring should be about offering support, advice and help to them. They believe trainees need to be guided and encouraged with constructive criticism being valued. Having someone to talk to is important.

This trainee definition of mentoring aligns with a nurturing description. There are similarities here with Anderson and Shannon's (1988) description of mentoring from an historical perspective. Mentoring being seen as an intentional process of nurturing, providing insight, support and protection. In the questionnaire trainees had been asked to score the importance of discussing mentoring roles. The average scores were Science 1.8 (1) and MFL 1.3 (1) indicating that discussion of mentoring roles was very important to trainees. When trainees were asked if mentoring roles had been discussed with them it was clear that this had been so in most cases. However, discussion of mentoring roles was reported as occurring by 91% of trainees in college-based work this falling to 77% for such discussion in school-based work. Thus almost a quarter of trainees had no discussion of mentoring roles by their school mentors. It could be argued that as most (91%) trainees had mentor roles discussed with them in college a repeat of this process in school would be unnecessary. However, bearing in mind trainees' strong affinity to nurturing descriptions of mentoring a brief explanation of mentoring roles in school *by the mentors themselves* would probably be beneficial to trainees.

During the interviews trainees were asked to describe how mentoring had helped and hindered them. Table 10.3, on the next page, shows the most common responses.

Table 10.3. Trainees’ comments on how mentoring had helped or hindered them

How mentoring helped	Giving help/specific help to me when needed (3) Good lesson feedback in a school (2) B school mentors were both very good (2) College tutors were very supportive (2) Friendly people (2)
How mentoring hindered	Very little/no feedback in school (6) No set hour with mentor each week in B school (3) It hasn’t hindered me (2) My new/alternative ideas were suppressed (2)

The following summary provides a response to question (i), “What does mentoring mean to trainees?”.

PGCE trainees see the main purposes of mentoring as giving support, help, feedback and time to them in a personable manner. Mentors and mentoring are both important to trainees and mentoring roles need to be made clear. The quality of mentoring was most hindered by the lack of feedback to trainees about their teaching and the lack of time spent by mentors with trainees.

Qu.(ii) What qualities do trainees look for in their mentors?

Data was provided from the questionnaires, interviews and observations. The questionnaire responses provide a description of some mentor qualities. Trainees were asked about the helpfulness of discussion with various mentoring personnel and this was scored on a five-point scale. The summary results are shown in table 10.4 on the next page.

Table 10.4. Trainees’ perceptions of the helpfulness of discussion with mentors (rank order data from the questionnaire surveys)

The helpfulness of discussion	Score mean and, (mode) on five point scale, where 1 = very helpful, 3 = OK, 5 = not helpful at all		
	Science	MFL	Overall
Other PGCE trainees	1.7, (1)	1.5, (1)	1.6, (1)
Subject Mentor	1.9, (1)	1.6, (1)	1.7. (1)
College Tutor	2.0, (2)	1.4, (1)	1.7, (1)
Other teachers	1.9, (2)	2.4, (3)	2.2, (2.5)
Professional Mentor	2.9, (3)	2.8, (3)	2.9, (3)

The most helpful mentors to trainees are their peers, Subject Mentor and College Tutor. The value of peer mentoring is noteworthy as evidence of its importance was found throughout this research. The Subject Mentor and College Tutor are the people most directly involved with a trainee’s mentoring and clearly this contact and the mentoring processes it involves are highly valuable to trainees.

Professional Mentors receive the overall lowest rating with a modal score of 3 (OK). This may reflect a number of factors such as the more remote contact of Professional Mentors with trainees. Trainees’ teaching concerns over classroom management and subject knowledge usually have priority in early teaching (Fuller and Brown, 1975) and such issues are dealt with by the Subject Mentor or at departmental level. Professional mentors have a focus for delivering aspects of a wider, whole school and educational perspective, which for trainees might not have the same level of importance as their immediate, personal, teaching duties. Comments made by trainees about the lack of time, poor punctuality and availability of Professional Mentors to trainees are other factors that are likely to have reduced the score.

Trainees expanded on this numerical rating (table 10.5) when asked to write comments on the helpfulness of discussion with mentors in an open section of

the questionnaires. The phrase, “comment on the helpfulness” had been chosen to avoid directing the respondents to positive or negative comments. This ‘neutral value’ phrase hopefully avoided trainees being directed to polarise their responses. Table 10.5 shows trainees’ perceptions of the helpfulness of discussion with mentoring personnel. The table provides a rank order treatment of positive and negative comments about each mentor role.

Table 10.5. Trainees’ perceptions of the helpfulness of discussion with mentoring personnel (questionnaire surveys)

Mentor or key personnel	Helpfulness of discussion	
	Positive comments	Negative comments
Subject Mentor	Supportive (19) (Excellent) advice (16) Helpful (10) Constructive feedback (6) Their experience (6) New ideas (5) Always listened to me (3) Subject knowledge (3) Knew me as a person (2) Very approachable (2)	More discussion needed (10) Not much help (5) Too formal (3) No constructive advice (3) They only saw me with their classes (2) They didn’t practice what they preached (2)

Professional Mentor	<p>(Very) helpful for general school and GPS issues (14)</p> <p>Good / objective advice (6)</p> <p>Good support (5)</p> <p>A very helpful person (3)</p> <p>Useful to meet other students (3)</p> <p>Constructive criticism (2)</p> <p>Very approachable (2)</p>	<p>Hardly ever saw them (11)</p> <p>Nothing new discussed / it just repeated GPS work (8)</p> <p>They failed to keep or were late to appointments (6)</p> <p>Haven't had much discussion (5)</p> <p>They had no Specialist Subject Knowledge (5)</p> <p>Group was too big (5)</p> <p>Poor in both placements (4)</p> <p>The meetings didn't happen (2)</p> <p>It's not helped me (2)</p>
Other teachers in school	<p>(Different / new) ideas about teaching (28)</p> <p>Helpful advice (16)</p> <p>Support (13)</p> <p>Different opinions (11)</p> <p>Different teaching styles (6)</p> <p>Learning 'tricks of the trade' (5)</p> <p>Helped me to know the pupils better (3)</p>	<p>No feedback (2)</p> <p>Not at all supportive (2)</p>

College Tutor	(Excellent / good) advice (23) (Very good) support (18) Helpful (9) Positive feedback (9) Ideas on teaching (8) (Fair) objective opinions (7) Made time for you (5) Shared teaching experiences (5) Friendly (4) They care about us (4) Gave a wider perspective (3) Helped me to see how I could progress (3)	More 1 : 1 discussion needed (2) I only saw them once (2) Overly critical (2) Forceful (2) Negative (2)
Other PGCE trainees	Good to talk with others in the same boat / situation (26) Share ideas (21) Share experiences (20) Get to know that we all have similar problems (13) Support (9) Camaraderie (8) Good laugh / fun / helps with stress control (8) Share materials / resources (8) You can say what you think / it's a sounding board (6) Checking that I'm doing the right thing (4)	Very little contact with other students (4) I was on my own in the B placement (2) Little help to me (2)

It is not possible or appropriate to calculate any numerical comparison for the positive and negative attributes of mentor helpfulness from this qualitative, subjective data. However, an indication of the relative value of different personnel in the trainees’ perceptions of mentoring and the help or hindrance that each provides might be shown by the frequency and nature of their responses (table 10.6).

Table 10.6. Trainees’ overall perception of the value of mentoring personnel

Mentor or key personnel	Tally of Helpfulness of discussion		Total and (ratio of positive : negative comments)
	Positive comments	Negative comments	
Subject Mentor	72	25	97 (3 : 1)
Professional Mentor	35	48	83 (1 : 1)
Other teachers in school	82	4	86 (20 : 1)
College tutor	98	10	108 (10 : 1)
Other PGCE students	133	8	141 (17 : 1)

If a tally of the total number of positive and negative comments for each mentor role is made this should indicate the motivation of respondents to offer opinions. The frequency of response can therefore be considered an indicator of the significance that that mentor has for trainees. If the mentor role had little significance to trainees one would expect few comments to be made. A high frequency of comments could reflect either very helpful or very unhelpful mentor roles. The possible value to a trainee of a particular mentor might be shown by the ratio of positive to negative comments about that mentor role. In all cases, except that of Professional Mentor, there were more positive comments than negative ones. This indicates that trainees generally responded positively to their mentors. Bearing in mind both the frequency and ratio components it seems clear that a ranked order of mentor value, similar to that

shown earlier (table 10.4) can be produced. Peers, Subject Mentor and college tutors' roles score highly with the Professional Mentor being last. Two other points appear important. Firstly the vast majority of comments made by trainees concerning the helpfulness of discussion with other teachers, peers and college tutors were of a positive nature with positive to negative ratio scores of 20:1, 17:1 and 10:1 respectively. Secondly, although the 'other teachers in school' group produced the greatest positive to negative comment ratio this group had been seen as less important than peers, Subject Mentors and college tutors in earlier work (table 10.4). A conclusion for this group might be that 'other teachers' have less direct involvement in the mentoring of trainees. 'Other teachers' are seen more as colleagues, for informal discussion, as they do not have designated roles for PGCE mentoring, which includes trainee supervision and assessment. In these respects they offer few threats to trainees by their 'distance' and are, encouragingly, perceived as being almost exclusively helpful. Consequently, it seems very important that opportunities are created for trainees to meet, talk and work with a variety of teachers in school *in addition* to those with designated mentoring roles. The data also shows that interaction with a range of experienced teachers helps trainees with their socialisation into the staffroom and 'whole school' community.

This matter of mentor qualities was pursued further by interview. Trainees were asked to say what makes a good Subject, Professional or College Mentor. This question was not identical to the one posed in the questionnaire. It did not ask for comment of other teachers in school or of PGCE trainees. It also directed trainees to comment upon the positive attributes of key mentoring personnel. Table 10.7, on the next page, summarises this data.

Table 10.7. Trainees’ perceptions of what makes a good mentor

Mentor	Good qualities
Subject Mentor	Someone who makes time for you (8) Enthusiastic (6) Gives critical but constructive feedback (6) Supportive (5) Approachable (5) Flexible (5) Someone who understands students’ needs on a PGCE course (3) Well-organised (3) An experienced teacher (3) Positive attitude (2) Keeps you on task (2)
Professional Mentor	Supportive (5) Makes time for you (4) Good punctuality and reliability (2) Well organised (2) Encouragement (2) Friendly (2)
College tutor	Supportive (6) Constructively critical (6) Approachable (4) Makes time for you (3) Good quality written feedback (3) Always available / on call (3) Encouragement (2) Positive attitude (2) Suggests targets (2)

My field notes made during the observational study supply some additional data. In three cases the trainees had considered the seating of lesson observers and had prepared photocopies for these people. No specific preparations had been made in the other five cases. This could indicate a low valuing of the mentor involvement but it could also reflect the trainee's principal preoccupation with their teaching, a stressful event, in which they were being assessed by multiple observers. Although college tutors spent most (up to 75%) of the trainee's lesson writing, and subject mentors wrote less, eye contact was exchanged in most cases between the three parties. Additionally, in small pupil group activities, most of the observers interacted with pupils and trainee. Eye contact and class-activity interaction seemed to be encouraging to and valued by trainees. Such mentor interaction probably helped to lower anxiety levels of the trainees. Six of the eight trainees appeared positive, enthusiastic and willing to accept and act on advice. They seemed to be responding to a climate of support, constructive feedback, enthusiasm and the empathetic disposition of their mentors. The other two trainees were reserved and showed little contribution to discussion. In-line with the trainee-valued mentor qualities of support and encouragement three college tutors gave frequent verbal and gestural encouragement to trainees and maintained good eye contact throughout discussion. My observational summary notes record:

In most cases (6) a friendly discussion with humour occurred and the trainees seemed to value the atmosphere created ...it allowed them to feel relaxed and confident. In the other 2 cases there was a business-like atmosphere with these qualities absent.

(Observation summary notes, 2001, qu.15)

By examining the evidence from questionnaire, interview and observational findings an answer to question (ii), "What qualities do trainees look for in their mentors?" can be formulated. As triangulated data is only available for

Subject Mentors, Professional Mentors and College Tutors the summaries will be concerned with these three mentor roles. PGCE Science and MFL trainees at SMC value the following qualities in their mentors:

Subject Mentor qualities

A good Subject Mentor will support the trainee, offer advice, ideas and help to them. They will make time for the trainee, encourage them and give constructive criticism in a friendly and positive manner. The Subject Mentor should be an approachable person who listens to the trainee and by sharing their own teaching experiences can empathise with them. They should have good specialist subject knowledge and be experienced teachers.

Professional Mentor qualities

A good Professional Mentor will provide information on whole school and general educational issues, enhancing the college's General Professional Studies course. They will organise and keep regular meetings with trainees that start on time. These meetings, which bring the school's trainees together, are important but the trainee group should not be too large. The Professional Mentor should support the trainee and offer helpful and objective advice from their more distanced stance. A friendly and approachable Professional Mentor gives additional support to a trainee whilst on Teaching Practice.

College Tutor qualities

A good college tutor will provide high quality advice, support and help to trainees. Through an encouraging, enthusiastic and positive approach they will give ideas on teaching and constructively criticise the trainee's own teaching, from an objective and wider perspective. They need to be someone who the trainee already knows. By sharing teaching experiences and providing time to talk with the trainee they can show that they care, helping the trainee to see for themselves how to make progress.

B. Mentoring strategies related to the planning, teaching and evaluation of lessons

Qu.(iii) What are trainees' views about the use and value of:

(a) observation of experienced teachers

(b) collaborative teaching

(c) solo teaching and co-analysis of practice?

The questionnaires and interviews provided data on trainees' perceptions of three strategies used to prepare them to teach classes of pupils.

(a) observation of experienced teachers

Trainees were asked in the early teaching questionnaires about the helpfulness and variety of teacher observation. The following responses reflect opinions of trainees (83) after the completion of most of their A placement observation at a time when their solo teaching of classes had just begun. With respect to the helpfulness of teacher observation both Science and MFL trainees rated this very highly with scores of 1.5(1) and 1.4(1) respectively. In both subjects trainees had usually observed a selection of different teachers. Science trainees had, on average, observed more teachers (9.3) than MFL trainees (5.5) however there was a wide range within each subject. Science trainees observed between 3 – 15 different teachers with MFL trainees seeing between 1–12 teachers. An unrelated 't' test supports a case, where $p < 0.05$, for a significantly lower number of teachers observed by MFL trainees. This may be related to the relative sizes of these two school departments or to subject policies with respect to trainee observation. Science departments may, typically, have more teachers and be less specialised at KS3 and KS4 in the teaching of their subject to pupils. This would create more opportunities for Science trainees to observe a greater variety of teachers. Interestingly though the amount of time trainees had spent observing experienced teachers varied between the subjects and this could also have bearing on the variety of teachers

observed by trainees. Science trainees said they had observed for an average of 37.3 hours whilst MFL trainees had spent less than half this time with an average of 17.8 hours. Although this data shows that Science trainees had observed experienced teachers for significantly more time ($p < 0.01$) than MFL trainees the range of observation time was tremendous and overlapped between the two subjects. Science trainees reported having spent between 10 – 100 hours undertaking observations with MFL trainees stating between 5 – 50 hours. It is evident that observation of experienced teachers at an early stage in the PGCE course is very helpful to trainees but clearly some guidance on the number of different teachers observed and the amount of time spent undertaking observation would be useful and would move towards equality of course provision. Observational time ranges of 10 to 100 hours for different trainees at the same point in the same PGCE subject do not suggest comparability or the best use of this strategy to promote teacher preparation. Trainees were asked, in the early teaching questionnaires if they thought enough observation had been undertaken. Whilst the majority (76%) of science trainees thought enough observation had been undertaken less than half (46%) of MFL trainees thought that enough observation had been done.

Using the observational time data cited earlier it might be possible to suggest an average time that a typical student should spend undertaking early course observations. A mean observation of 17.8 hours for MFL trainees was not considered enough by most (54%) MFL trainees whereas the mean observational time of 37.3 hours satisfied most (76%) of the Science trainees. Although influenced by many other factors such as an individual student's needs for observation, the nature of the observations undertaken and discussion of observed lessons with experienced teachers it seems possible to propose a typical duration for observational experience. This would be 20 – 30 hours of lesson observation, for an average trainee, in the first half of the first teaching practice. A range of 15 – 40 hours may be suitable to cater for different trainee needs. These figures, based upon trainee opinions, seem more appropriate than

the wide 5 – 100 hours range of classroom observational experiences actually provided for PGCE trainees.

Trainees were invited, in the questionnaires, to give comments on the value of lesson observation. The comments made from Science and MFL trainees were very similar and were amalgamated. The helpful and unhelpful aspects of lesson observation are shown in table 10.8.

Table 10.8. Trainees’ comments on the value of lesson observation (School A, First Teaching Practice)

Helpful aspects of lesson observation	Unhelpful aspects of lesson observation
<p>Seeing different teaching styles (18)</p> <p>You pick up tips / ideas (13)</p> <p>See / learn discipline methods (11)</p> <p>Get to know the class before teaching them (10)</p> <p>Useful to continue observation after you start teaching (7)</p> <p>Observing pupil behaviour (6)</p> <p>See theory put into practice (4)</p> <p>See good practice (4)</p> <p>Learn pupil names (3)</p> <p>See what level to teach at (3)</p> <p>You learn a lot at the back of a class (2)</p> <p>Different teacher personalities (2)</p> <p>See bad practice (2)</p>	<p>Boring / tedious(8)</p> <p>Time to observe / reflect taken away by the need to be a classroom assistant (5)</p> <p>Time consuming (4)</p> <p>You need to continue observation when your teaching begins (4)</p> <p>Lack of feedback after the lesson (3)</p> <p>Difficult to judge how involved to get (2)</p>

The most frequent comments made by trainees can be used to summarise the value trainees see in the observation of experienced teachers, at an early stage in their PGCE course. Early course observation provides trainees with real life

examples of teaching strategies and classroom management skills. It gives trainees ideas and tips and provides knowledge of pupils and their behaviour, *prior* to pupils being taught by the trainees. Importantly, observation allows examples of disciplinary processes to be seen and learned for future use. Lesson observation therefore provides trainees with knowledge and techniques that help them organise their own classes thus promoting the early development of classroom survival skills (Fuller and Brown 1975). Interestingly, the development of subject knowledge was not stated as something to be gained from lesson observation. Presumably subject knowledge was understood by trainees to be advanced, academic knowledge rather than subject knowledge appropriate in level, language and context to the pupils being taught. Supporting the high value that trainees place in observation there were over three times as many helpful than unhelpful comments made with respect to the value of lesson observation. 16% of trainees' (12) saw observation as boring, tedious or a waste of time. This criticism may be partly explained if it came from trainees who had unduly long observation periods. Such criticisms may reflect factors such as the organisation of lesson observations, integration of trainees in the lesson, variety of lessons observed and/or lack of discussion about the observed lesson. 11 trainees made comments about the need for observation to continue after solo teaching begins. If an appropriate number of varied classroom observations are arranged for trainees and guidance over any interaction of the trainee within the lesson is clarified before observation some of these criticisms would be reduced. Discussion of the observed lesson with the teacher and retaining a reduced component of lesson observations, after solo teaching begins, would address other trainee concerns.

In the interviews at the end of the first teaching practice trainees were asked if they agreed with the assertion, "Lesson observation was a good idea early on in the PGCE course". This assertion had been constructed from the trainee comments made in the early teaching questionnaire. In interview trainees supported the comments made in the questionnaire and developed these a little

further. Science and MFL responses were combined, as they were similar. A summary of trainees’ comments is shown in table 10.9.

Table 10.9. Trainees’ responses, in interview, to the assertion, “lesson observation was a good idea early on in the PGCE course”.

Yes – but only to a point (5)
Observation should occur throughout the course, it shouldn’t be just front-loaded (5)
I missed out on some of this
Observation outside the department was useful
Observation provides a new perspective, discussion time and a breathing space
Make sure you observe different teachers and different classes
The key time for observation is obviously at the start of the course

In the questionnaires trainees were asked what proportion of observed lessons were discussed and evaluated with them before and after the lesson. They were also asked the importance of such discussion and evaluation with the class teacher. Science and MFL trainee responses were similar with, on average less than 25% of lessons being discussed prior to observation and less than 50% of observed lessons being discussed after the lesson. This means that for many of the lessons the trainees observed during their early teaching experiences no discussion or evaluation with the class teacher occurred. Indeed the mean value, of *just under 50%*, included a few trainees who had *teacher discussion for every lesson observed*. The modal discussion value was well under 50% of observed lessons. It should be noted that 34% i.e. 26 trainees said that none of the lessons they observed were followed by teacher discussion. In contrast to these low frequencies of teacher discussion and evaluation the trainees said that such discussions were valuable with average scores of 2.3(2) for discussion prior to observation and 1.9(2) for discussion after observation. This discrepancy between the low figures for teacher

discussion of observed lessons and trainees' perceptions of the high value of such discussions needed further investigation. During the interviews, at the end of the first teaching practice, trainees were asked to comment on why they thought that most observed lessons weren't discussed in detail with the class teacher. The main reason given was, "a lack of teacher time (5)" and "teachers have full days and no time to do this (2)". Two trainees said it was hard to pin the teacher down to talk to them and one felt that they were an inconvenience to the teacher. Two other trainees said that it would work well if properly organised. When asked if it was valuable to establish the structure and focus of a lesson before it was observed the majority of interviewees said, "yes ...even though a lesson plan may not exist a short discussion or even a few lines of text would help". Everyone agreed that having some idea of the lesson before it was observed could only help the trainee, especially at this early point in their teaching.

When issues concerning lesson observation were raised in the end of course questionnaire and interviews the comments were similar to those expressed earlier in the course. The majority of trainees thought that some, albeit a reduced amount, of observation should continue throughout the PGCE course. A number of trainees had not had any lesson observation after the first week in their second teaching placement school and in two cases this was in spite of asking for some. Several comments highlighted the value of seeing a variety of teachers, including those in other departments. 50% of the Science trainees thought that they had done enough observation in the B placement whilst only 33% of the MFL trainees considered enough lesson observation had been done. Both these figures are lower than the corresponding ones responding to the same question in the A (first) placement school.

It appears that the observation of experienced teachers with their classes is dramatically reduced or stops in the second teaching placement. Although trainees generally perceive lesson observation as less valuable in their second placement (with a mean value of 1.5 in early teaching dropping to 2.5 at the end of course) a lot of benefits for the continued observation of experienced

teachers were given (end of course, questionnaire, qu. 8d). 23% (15 students) said they would have liked some / more observation in their second teaching placement. 58% of trainees thought that they had not had enough observation in their second teaching placement (end of course, questionnaire, qu. 8c). This opinion was more strongly expressed by MFL than by Science trainees.

The following provides a summarised response to research question iii(a), “What are trainees’ views about the value of observation of experienced teachers?”. Trainees saw lesson observation as a valuable strategy. On the basis of trainee comment and times spent observing a recommended figure of 20-30 hours of observation time can be proposed for the first half of the first teaching placement with a range, to fit individual trainee needs, of 15 – 40 hours. Lesson observation is something that should be front-loaded in the PGCE course but it should continue on a reduced basis throughout the course. There is currently insufficient observation for most trainees in their second teaching placement. Trainees should be able to see a variety of teachers and classes including those from other departments. Observation will be more valuable when some discussion and evaluation with the class teacher occurs and a brief outline of the structure and focus of a lesson is needed before it is observed to orientate the observer and to increase the value of this activity. In order to regulate the amount, variety and quality of the observational experience for trainees these events and teacher discussions need to be formally organised. Lesson observations provide trainees with real life examples of teaching strategies and classroom management skills. They give trainees ideas and tips (sometimes Schon’s (1983) knowing-in-action, tacit behaviours) and provide knowledge of pupils and their behaviour, prior to classes being taught by the trainees. Later on in the PGCE course, lesson observations maintain contact with other teachers and allow trainees to observe, with a better-trained eye and with a better ability to evaluate, teaching and learning strategies. Importantly, observation allows examples of disciplinary processes to be seen and learned for their future use. During the

second teaching placement, which is dominated by solo teaching strategies. occasional observations provide variety and “breaks” or “breathing spaces” for trainees that will help sustain their energy and enthusiasm for teaching.

With respect to qu.iii(b) trainees were asked in the early teaching questionnaires about the helpfulness and variety of collaborative teaching. The following responses reflect opinions of trainees’ (83) after the completion of most of their first teaching placement observation, at a time when their solo teaching of classes had just begun. Science trainees rated collaborative teaching as helpful with a score of 2.1(2) whilst MFL trainees saw collaborative teaching as just better than OK at 2.8(3). Both of these scores were below the corresponding ones for classroom observation. In both subjects far fewer teachers had undertaken collaborative teaching with trainees than the number of teachers trainees had observed. The two subjects were similar with an average of 1.9(2) teachers having undertaken some collaborative teaching with trainees. The range of 0-4 teachers shows that some trainees did not do any collaborative teaching. The average time spent teaching collaboratively was again similar in both subjects at just over 5 hours, covering a range of 0-20 hours. Over half (58%) of trainees considered that they had not done enough collaborative teaching. Although collaborative teaching was not seen to be as important as lesson observation there had been a variety of provision for this mentoring strategy with some trainees not gaining any collaborative teaching experience. The trainee data suggests that some collaborative teaching, perhaps just 5-10 hours, with a few different teachers would be helpful to trainees in the first half of the first teaching practice. Trainees were invited in the questionnaires to give comments on the value of collaborative teaching. The comments made from Science and MFL trainees were very similar and were amalgamated. The helpful and unhelpful aspects of collaborative teaching are shown in table 10.10.

**Table 10.10. Trainees' comments on the value of collaborative teaching
(in School A, first teaching practice)**

Helpful aspects of collaborative teaching	Unhelpful aspects of collaborative teaching
<p>Help in the hard / tricky parts of a lesson (8)</p> <p>Eases you into teaching (7)</p> <p>Gives you a bit more confidence at the start (6)</p> <p>If things went wrong the teacher could step in and help (6)</p> <p>Experience of team teaching (4)</p> <p>The teacher could take over if / when I dried up (3)</p> <p>This would have been valuable (3)</p> <p>You learn from each others successes and failures (2)</p>	<p>Pupils unsure who's in charge (8)</p> <p>Pupils don't respect you as their teacher (6)</p> <p>Difficult to co-ordinate due to lack of teachers' time (5)</p> <p>Class teacher dominates you and takes over (4)</p> <p>You feel like a teacher's helper (4)</p> <p>Different teaching styles may conflict (2)</p>

By looking at the most frequent comments made by trainees the main value trainees see in collaborative teaching with experienced teachers, at an early stage in their PGCE course, can be summarised. Early course collaborative teaching with an experienced teacher eases trainees into their teaching. It gives help to trainees and provides immediate support to them if they 'dry up' in a lesson, thus boosting their confidence. Experience of team teaching and learning from each other's successes and failures also occurs. The drawbacks of collaborative teaching were concerned with low status in front of pupils and teacher as well as differences in teaching styles. Trainees need to be supported so that they feel they have the same status, authority and respect as the experienced teacher. Students also need time with the class teacher to discuss

their collaborative teaching at some point prior to the lesson in order that they can plan and prepare in confidence.

In the interviews at the end of the first teaching practice trainees were asked if they agreed with the assertion, “Collaborative teaching (with an experienced teacher) undermines your authority in class”. This assertion had been taken from trainee comments, in the early teaching questionnaire that clearly reflected perceptions of low trainee status in collaborative teaching. Science and MFL responses have been combined as they were similar. A summary of their comments is shown below in table 10.11.

Table 10.11. Trainees’ responses, in interview, to the assertion, “Collaborative teaching, with an experienced teacher, undermines your authority in class”.

No, it depends on how the teacher integrates you into the lesson(7)
I’d have liked to have done some of this (3)
The teacher should not undermine the authority of the trainee in front of the class (2)
I did this and enjoyed it (2)
I’d do collaborative teaching all the time and take half the pay if I could!

These interview comments suggest that there is value in the use of collaborative teaching and that if the trainee is appropriately integrated, on equal terms as the teacher, into a lesson, concerns over low status and low self-esteem can be avoided. Again, some trainees did not experience any collaborative teaching although they saw this as a desirable, early, mentoring strategy. A mature Science trainee, who had taught for several years in adult education, was clearly a strong advocate of collaborative teaching when he remarked, “I’d do collaborative teaching all the time and take half the pay if I could!”

The early questionnaire results showed that observation of lessons was seen by trainees as more valuable than collaborative teaching. Additionally, *all* trainees had undertaken lesson observation whilst *some* trainees did not undertake any collaborative teaching. Trainees had spent four (MFL) to eight (Science) times as long observing lessons compared to collaborative teaching them. Consequently, trainees were asked in interview why so little time is spent on collaborative teaching. The most common response was a lack of time, as collaborative teaching requires the trainee and teacher to sit down together and jointly plan the lesson. Trainees commented on lack of teachers' time to do this ...or to want to do this. Three trainees said that, "some teachers don't value collaborative teaching" or that, "it doesn't work" or "it's not proper teaching". Two trainees commented that their teachers wanted to do other work whilst they taught their classes. There was just one trainee who said he wanted to go solo and bypass team teaching.

In the questionnaires trainees were asked what proportion of collaboratively taught lessons were discussed and evaluated before and after the lesson. They were also asked the importance of such discussion and evaluation with the class teacher. Science and MFL trainee responses were similar with 50% of lessons being discussed prior to collaborative teaching and 60% of collaboratively taught lessons being discussed after the lesson. This means that almost half of the lessons the trainees collaboratively taught during their early teaching experiences had no preparatory discussion or evaluation with the class teacher. Indeed, the mean of just under 50% was influenced by a few trainees who had teacher discussion for every lesson collaboratively taught. This data suggests that some trainees were being integrated into lessons and being required to teach without any prior discussion with the class co-teacher, at a very early stage in their teaching. It is probably this uncoordinated introduction to teaching that generated the comments reflecting low status and low self-esteem. In contrast to these low frequencies of teacher discussion and evaluation the trainees said that such discussions were highly valuable with average scores of 1.6(1) for discussion prior to observation and 1.5(1) for

discussion after observation. This discrepancy between the low figures for teacher discussion about collaborative teaching and trainees' perceptions of the very high value of such discussions is large and reminds us that for beginning teachers, at least, discussion with the co-teacher both before and after the shared lesson is something that is considered very important indeed to trainee teachers. Such discussions are likely to be important in building trainee confidence, for early teaching encounters, as well as helping trainees with their lesson planning. The development of the mentoring relationship and rapport with the experienced teacher is also likely to be important.

Around half of the Science and the majority of the MFL trainees had been placed in pairs or small groups in school departments for their teaching practice. All the trainees interviewed had been in such pair or multiple teaching placements. This meant that such school departments had the potential to deploy their trainees' teaching commitments to include some peer collaborative teaching. The early teaching questionnaire results showed that apart from two trainees who had shared one lesson the strategy of peer collaborative teaching was not used in Science. Although MFL trainees had, on average, peer collaboratively taught 6.3 lessons the use of this strategy varied widely from 0 to, in one case, 24 peer shared lessons. Students considered the value of peer collaborative teaching to be quite high with a mean of 2.2(1.5). At interview, in support of peer collaborative teaching, trainees suggested advantages such as, "I haven't tried this but I think it would be fun (9)", "you'd get good ideas and time to discuss them too (7)". Three trainees said that they wish they could have done this and it would have been another way to offer help and support to each other. Two trainees said that, depending on how it was arranged, peer collaborative teaching could also save some time e.g., "you might only teach the first half of the lesson", "you might have only half the marking to do". On the basis of the evidence it seems reasonable to suggest that the introduction of some peer collaborative teaching would be valuable to most trainees. It would enhance the existing provision where, in spite of pair placements very little if any peer collaborative

teaching occurs. In addition to benefits of help, support and the time to plan and debrief such a mentoring strategy seems to provide trainees with that rarely commented on but vital emotion of fun. Another benefit from the introduction of some peer collaborative teaching would be to partly allay the concerns sometimes expressed by schools over too many classes being taught by trainee teachers. A few trainee-shared classes would reduce this concern. Thus benefits for trainees and for schools would occur through the development of more trainee peer collaborative teaching in the first teaching practice.

When issues concerning collaborative teaching in the second teaching placement were raised in the end of course questionnaire and interviews there was much less support for such a strategy. Both subjects were similar and the importance of collaborative teaching with an experienced teacher was perceived to be of little value by trainees, with a mean of 3.4(5). However, fewer than a quarter of trainees had done any collaborative teaching in their second teaching practice with experienced teachers. For the minority that had, up to 40 hours, with a mean of 5.4 hours of collaborative teaching had occurred. Trainees saw their second teaching practice as providing a closer model of a qualified teacher's role and therefore this teaching practice needed to be dominated by solo teaching. Some commented upon the value of sharing large classes, of supporting each other and of improvements in pupil motivation. The biggest drawback on a practical level was, again, the lack of time with the teacher to plan and evaluate this activity. In spite of most trainees not having gained any experience of teacher collaborative teaching in the second teaching practice half of them considered they had done enough of this. Following the same trend *peer* collaborative teaching was seen as less important in the second teaching practice with a mean of 2.8(3.5) for the combined subjects, which showed similar responses. Just two Science and four MFL trainees had undertaken peer collaborative teaching. This data suggests that the fairly high value most trainees place in collaborative teaching during their first teaching practice is not replicated in the second teaching

practice. Consequently, no case can be generally made for the inclusion and development of collaborative teaching in the second teaching practice, although it could be of value to specific trainees.

In summary collaborative teaching is seen by trainees as a valuable strategy in the early stages of their teaching. On the basis of student comments a recommended figure of 5-10 hours of collaborative teaching time can be proposed for the first half of the first teaching practice. Additionally, peer collaborative teaching was seen as a valuable component in the first teaching practice. Hardly any peer collaborative teaching occurs at present in spite of many students being placed in pairs or small groups in school departments. Benefits in terms of help, support, time and fun could be provided for trainees by the introduction of some peer collaborative teaching. Benefits would also be provided to the school in reducing the number of classes taken by trainee teachers. Whilst it would be fairly easy for a pair of trainees to arrange times for the planning and evaluation of peer collaboratively taught lessons a lack of teacher contact time was the most important criticism from trainees over trainee / teacher collaborative teaching. Any introduction, or extension, of collaborative teaching should ensure opportunities for prior planning and post-teaching evaluation are created.

Question iii(c) explored aspects of solo teaching and co-analysis of practice. Trainees were asked, in the early teaching questionnaires, about the helpfulness and variety of solo teaching. The following responses reflect opinions of trainees (N = 83) after the completion of most of their first teaching placement observation at a time when their solo teaching of classes had just begun. With respect to the helpfulness of solo teaching both Science and MFL trainees rated this extremely highly with scores of 1.2(1) and 1.1(1) respectively. In both subjects classes had been taught from a selection of different teachers. Science trainees had, on average, taken classes from more teachers (3.0) than MFL trainees (2.1) however there was a range within each subject. Science trainees taught classes from 1 – 7 different teachers whilst

MFL trainees had a smaller range, taking classes from 1-3 teachers. An unrelated 't' test supports a case, where $p < 0.05$, for a significantly lower number of teachers' classes taken by MFL trainees. The differences between the subjects are similar to those observed with respect to the lesson observation of experienced teachers. As postulated with lesson observation Science departments may, typically, have more teachers and be less specialised at KS3 and KS4 in the teaching of their subject to pupils than MFL departments. This would create more opportunities for Science trainees to take over classes from a greater variety of teachers. The amount of time trainees had spent solo teaching, at this early teaching stage, varied between the subjects and this could also have bearing on the variety of teachers observed by trainees. Science trainees said they had taught for an average of 12.6 hours whilst MFL trainees had taught for an average of 8.0 hours. Although this data shows that Science trainees had taught for significantly more time ($p < 0.05$) than MFL trainees the range of solo teaching time was considerable and overlapped between the two subjects. Science trainees reported having spent between 3 - 30 hours undertaking solo teaching with MFL trainees stating between 6 – 15 hours. In spite of MFL trainees having done significantly less solo teaching than Science trainees, 75% of them said that they had done enough solo teaching compared to only 45% in the case of Science trainees. There may be a number of factors relevant here. MFL trainees were mainly foreign nationals whilst the Science students were, with the exception of an English speaking Canadian, all British. In the interviews some MFL trainees had discussed the differences of the UK education system and of the 'school culture' being different to that in their native country. It could be that MFL students require a longer time and more gradual introduction to solo teaching. The lower amount of solo teaching for MFL trainees, was seen, by most, as appropriate. It might be presumed that MFL trainees were taking longer preparing their lessons than Science trainees but data, to be presented later, shows the opposite to be true. Perhaps personality styles of typical MFL and Science trainees are different. Gardener (1984) proposes that a person's mind is framed by multiple

intelligences. On average MFL trainees may value the processes of reflection and abstraction of aspects of their teaching more than Science trainees who value emphasis on a practical ‘hands-on’ approach. It is important to remember that these are average descriptions and it is likely that within each subject a wide variation in personality and perceived teaching needs will exist. The PGCE course requires some flexibility in order to tailor the prescribed course to the individual needs of its clients. It was not appropriate, as seemed the case for observation and collaborative teaching, to recommend the amount of time to be spent undertaking solo teaching. In addition to the different perceptions of trainees from the two subjects this data was collected at too early a stage to be able to quantify reliably any recommendations for the amount of solo teaching in the first teaching practice.

Students were invited in the questionnaires to give comments on the value of solo teaching. The comments made from Science and MFL trainees were very similar and were amalgamated. The helpful and unhelpful aspects of solo teaching being shown in table 10.12.

Table 10.12. Trainees’ comments on the value of solo teaching (in School A, first teaching practice)

Helpful aspects of solo teaching	Unhelpful aspects of solo teaching
Gives you a good insight / experience of a teacher’s job (13)	None (9)
Invaluable / this is what we’re here for (8)	Poor pupil behaviour (5)
It improved my confidence (7)	Can be daunting / scary (5)
It improved my classroom organisational skills (6)	Hard work (2)
My discipline / class control skill developed (6)	Less support (2)
Pupils see you as the teacher (6)	All the pressure’s on you (2)
	We had to do this even though we said that we weren’t ready (2)

You get to know pupils better (3) Learn from your mistakes (2) You need to go it alone (2) Learn to cope better (2) Helps to focus preparation time (2) The best part of the PGCE course (2)	
---	--

The help offered by solo teaching was seen as highly valuable to trainees. There were over three times as many helpful comments made as unhelpful ones. By looking at the most frequent comments made by trainees the main value trainees see in solo teaching, at an early stage in their PGCE course, can be summarised. Early course solo teaching provides trainees with direct experience of teaching helping to prepare them for their teaching careers. This is seen as the *raison d'être* of the PGCE course. Solo teaching helps students to develop their confidence, class control, time and classroom management skills. The status of the trainee teacher is raised when they undertake solo teaching as the pupils, whose names this strategy helps them learn, identify the trainee with the role of their teacher.

In the interviews at the end of the first teaching practice trainees were asked if they agreed with the assertion, “Individual (solo) teaching is the best possible way to learn how to teach”. This assertion had been chosen, as it was a common statement made by trainees’ in the early teaching questionnaire. In the interviews this assertion was strongly supported by trainees and their reasoning was investigated. Science and MFL responses have been combined, as the responses were similar. A summary of their comments is shown, over the page, in table 10.13.

Table 10.13. Trainees’ responses, in interview, to the assertion, “Individual (solo) teaching is the best possible way to learn how to teach”.

Yes (7)
Observation and collaborative teaching are important to(4)
The important point is to give support and feedback (3)
This is what real teachers do (3)
Diversity of teaching is important
For a poor student solo teaching would be the worst way to learn as they’d need more support and help
Sometimes you learn better (confidence, discipline) when the teacher’s absent

This data supports that obtained in the questionnaire but it was clear from the trainees that continued help, support and feedback on their teaching was needed throughout their solo teaching. The trainees expressed concern over the lack of teacher support. They were asked, “what factors influence the planning of solo lessons with the usual class teacher?” The lack of teacher time or lack of a timetabled appointment for such meetings were the main criticisms. A number of trainees mentioned that they felt guilty having to bother or track down the teacher and that they usually often only managed a quick, informal chat about the lesson. Science trainees as reported by Liversidge (2002), often received help, on their lessons, from Science Technicians. Although Science Technicians are not trained teachers they have seen aspects of many Science lessons. Their availability to trainees, in preparation rooms, whilst trainees are preparing lessons, make technical staff a common source advice to trainees. It is interesting that in some situations where teacher support was lacking Science trainees were planning their lessons on ‘patchy’ observational data from unqualified teachers. The lack of time for teacher help, support and feedback was the most common criticism and in the questionnaires trainees had been asked what proportion of solo taught lessons were discussed and evaluated before and after the lesson. They were also

asked the importance of such discussion and evaluation with the class teacher. Science and MFL trainee responses were similar with, on average 33% of lessons being discussed prior to observation but almost 80% of observed lessons being discussed after the lesson. This means that most of the lessons the trainees were required to teach, in the earliest stages of their solo teaching, had not been planned with an experienced teacher but the majority had been discussed and evaluated after presentation. The high level of post-lesson feedback would be very valuable to trainees who scored the value of post-lesson discussion at 1.3(1). In interview several trainees said that receiving some constructively critical written, as well as verbal, comments on their lesson was the best type of feedback. Only one in three lessons had been planned with a teacher before being taught but and this activity was seen as less valuable by trainees than the post-lesson debrief at 2.3 (2.5). It is of concern that *most* lessons taught to pupils by trainees at the start of their solo teaching are not planned or checked with a teacher before they are taught. How can a new teacher, at the outset of their career, ensure the highest quality of teaching, learning and assessment in a lesson if it isn't planned with an experienced teacher? That trainees did not see such planning as really important perhaps reflects their concerns with classroom survival and their need to "go it alone" to prove themselves. A number of trainees mentioned that teachers were not available or keen to do this planning and it could have been seen as a trait of weakness or insecurity if special efforts had to be made by trainees to obtain teacher help.

When issues concerning solo teaching were raised in the end of course questionnaire and interviews the comments were, in most respects, very similar to those expressed at the early teaching phase. There was greater consistency of provision and a much enhanced trainee satisfaction over the quantity of solo teaching offered in the second teaching practice. The data from the end of course questionnaires are summarised in table 10.24.

Table 10.14. Trainees' comments on the importance of solo teaching in the second teaching practice

Trainees	Number of different teachers' classes taken Mean and (range)	Hours of solo teaching per week in second TP Mean +/-S.D. (range)	Was there enough solo teaching in the second TP? Yes (%)
Science	4.6 (2 - 7)	12.7 +/- 2.4 (9 – 18)	92
MFL	3.1 (2 – 5)	11.7 +/- 3.4 (8 - 20)	96

The amount of discussion and evaluation of solo taught lessons reduced in the second teaching practice. Compared to early teaching where 33% of the trainee's lessons had been discussed with a teacher before being taught this reduced to 25% in the second teaching practice. Whilst almost 80% of trainees' lessons had been discussed after presentation in early teaching only 33% were discussed in the second teaching practice. These are average figures, showing that most of the trainees' lessons during the second teaching practice were planned and taught without assistance from trained teachers. In some cases (reported at interview) except for the minimum mandatory programme requirement of lesson reports no support or feedback was provided in the second teaching practice. In a few cases a high level of support continued. When asked about the value of teacher discussion before and after solo teaching in the second teaching practice trainees' scored this as 2.7 (2) and 1.7 (1) respectively. These scores indicate that trainees perceive teacher discussion and evaluation of their lessons, especially after they have taught them, to be valuable or very valuable. Indeed, the scores are only slightly greater than the corresponding ones [2.3(2.5), 1.3(1)] in early teaching. It is clear that trainees would appreciate much higher levels of support than is currently provided from teachers with respect to planning but especially to the evaluation of their lessons. It seems important to incorporate this support in a formalised timetable, which raises the importance of such discussion and takes

the onus off trainees who found it difficult or unpleasant to “track down”, or “pin down” teachers.

In summary solo teaching is seen by trainees as their most valuable teaching strategy. The nature of the data from the early teaching experiences (time in course when collected and variability) makes it inappropriate to suggest average amounts of weekly solo teaching. However, a weekly timetable of no less than 10 or more than 14 hours of solo teaching would be appropriate in the second teaching practice. This should include a variety of classes taken from several different teachers in the school department. It is very important to trainees that their teaching is discussed with teachers giving verbal as well as formal, written feedback. The value of such discussions remains important throughout the PGCE course. When teaching timetables are given to trainees, appointments to establish teacher discussions also need to be made, thereby signalling the importance and creating the opportunity for such meetings.

Assimilating this data on mentoring strategies at different stages in the PGCE course a summary response to *question (iii)*, “*What are trainees’ views about the value of (a) observation of experienced teachers, (b) collaborative teaching, (c) solo teaching and co-analysis of practice?*” can be framed. Table 10.15, on the next page, provides this summary.

Table 10.15. Trainees’ views about the value of teacher observation, collaborative teaching and solo teaching at different phases in the PGCE course.

Mentoring Strategy	General Comments from trainees	
	Early Teaching comments	Late Teaching comments
Observation of teaching	Observational experiences are valuable and should be available throughout the PGCE course. A variety of teachers and classes should be observed mainly from the trainee’s subject area with some from other subject areas. The observed lesson should be briefly outlined before observation to set the context. There should be discussion of the lesson after observation.	
	20-30 hours of lesson observation should be front-loaded into the first teaching practice. It should continue on a regular but reduced basis to the end of the first teaching practice.	One lesson per week of lesson observation should be offered throughout the second teaching practice.
Collaborative Teaching	Collaborative teaching with experienced teachers and between trainee peers has value in the first teaching practice.	
	5-10 hours of collaborative teaching would be suitable, before Christmas, in the first teaching practice. This could be shared with experienced teachers and trainee peers.	Trainees saw there to be little value in collaborative teaching in the second teaching practice. (However, only 25% of trainees had done any collaborative teaching in the second teaching practice).

Solo Teaching	Solo teaching is the most valuable of all mentoring strategies. A variety of classes from several different teachers should be made available. It is important to create time for the discussion and evaluation of a trainee's lessons. Such teacher-trainee discussion remains important in the later stages of the course and should continue throughout the second teaching practice.	
	The amount of solo teaching given should be related to the individual student's circumstances in early teaching. From January 10 – 14 hours per week of solo teaching would seem appropriate for most trainees.	10 – 14 hours per week of solo teaching would be appropriate for most trainees in their second teaching practice.

Question (iv) investigated trainees' thoughts on the value of paired teaching practice placements. In both the early and late course interviews trainees were asked to comment on the value of paired teaching practice placements within a school's Science or MFL department. Only trainees who had experienced at least one paired placement were interviewed. Trainees (N = 36) were interviewed in their school placement pairs and thus the responses reflect such shared experiences. In order to gain a broader and fuller picture data collected from trainees who were placed singly into a school department for their teaching practice would be a useful addition. Trainees were invited to comment on the advantages and disadvantages of paired teaching practice placements. Table 10.16 summarises the comments made by trainees.

Table 10.16. Trainees’ perceptions of the advantages and disadvantages of paired teaching practice placements from trainees who experienced paired placements.

Advantages	Support and help (banter, mental, crying) from someone in the same position (8) Sharing subject knowledge and resources (6) Someone else to talk to (3) It boosts your confidence as you’re not alone (2) You could sometimes sort out issues without needing the mentor 2 students : 1 mentor is better for discussion It stopped both of us from leaving the course
Disadvantages	None (3) The mentor hour was shared so we had less individual time (3) The mentor kept complaining that there wasn’t enough time to do the job (2) There was a conflict of roles between Subject Mentor and Head of Department You need to be able to get on with the other person 2 trainees and 2 teachers sharing one KS4 class was too much for all

The trainees were strongly supporting the benefits of paired placements. At first glance were there almost twice as many comments made for advantages compared to disadvantages of such placements. However, when the nature of the comments made as “disadvantages” are considered the support is much, much stronger than this two to one ratio of comments suggests. Firstly, three comments under the disadvantages section state, “none” indicating support rather than criticism for paired placements. Most of the other “disadvantages” refer to issues of a lack of individual mentoring and mentors’ time or of mentor

role conflict. These are important issues of concern in trainee mentoring but they cannot, or should not be, related to the value of paired teaching practice placements. Each trainee brings their own funds and entitlement of mentoring provision to the school, which means that every trainee should have the same individual time and attention from their mentor irrespective of their single or paired placement in a school department. It would appear that some mentors did not duplicate mentee time but split one trainee's entitlement of mentor time between the pair of trainees. The 36 trainees consequently raised just two disadvantages of their paired placements. The first, "You need to be able to get on with the other person", raises the additional interpersonal dimension created by paired placements over single placements. Personalities differ and it appears, in a minority of combinations, that some pair conflict will be created hindering trainee progress. The second statement, "2 trainees and 2 teachers sharing one KS4 class was too much for all reminds us that collaborative teaching, with trainee teachers, has limits that need to be considered for the learning benefits of both pupils and trainees. The use of paired placements creates potentially valuable opportunities for trainees to share some classes, thus combining their solo with peer collaborative teaching. This can help trainees in terms of in-class help and support and in reducing the time of planning and resource preparation. It also helps school departments in finding classes for trainees to teach as one class can be shared by two trainees. The example quoted above must have taken collaboration too far as four teachers for one class of pupils was perceived, at least by one trainee, as too much for all!

The value to be gained from pair placements was taken a stage further in the late course interviews. Interviewees were asked to say how they would have felt if they had been the only trainee in the school's (Science or MFL) department. The eight pairs of trainees made the comments shown in table 10.17.

Table 10.17. Trainees’ comments, in interview, about their feelings on single departmental teaching placements.

I’d have felt very lonely / isolated (3),
I’d have been OK in my B school, which was friendly/open, but not in some schools (2),
I’d have quit the course if I’d been on my own (2),
It would have taken longer to settle in and develop confidence (2),
I had been on my own in the A school and didn’t like it – I complained and made sure I was one of a pair in the B school, This would have caused travel problems.

When asked to predict their feelings in a single placement the trainees’ strongest reactions are, again, those related to support and help with the additional consequence of their removal being expressed through feelings of loneliness. It would seem that some schools or school departments are more “trainee friendly” than others and that in one case the experience of being placed singly on a Teaching Placement was enough to cause the trainee to complain and specifically request a paired placement for the second Teaching Practice. It was fortunate such an opportunity was available. Again two (different) trainees said that they would have left the course if they had been placed singly into the school department. The pair placement, in some circumstances, helped with trainee travel arrangements, which, for many trainees is a considerable bonus in terms of convenience and saving time.

In summary a response to *question (iv)*, “*What do trainees think about the value of paired teaching practices placements*”, can be framed. Trainees who have experienced paired teaching practice placements very strongly support their use in the PGCE course. Benefits are provided to the trainees themselves as well as assisting trainee retention on the PGCE course and progression to

Qualified Teacher Status. The same qualities of support, help, someone to talk to and boosts in confidence that were cited by trainees as important purposes of mentoring (table 10.1) appear here. The lack of such support to trainees would increase their feeling of loneliness and isolation. In four cases the paired placement kept trainees on the course and enabled them to become qualified teachers. There were, in some cases, advantages to trainees in their travel arrangements. In a few cases, where trainees have difficulty co-operating with each other, strategies for interaction will need careful consideration. Although the opportunity offered through paired placements for some trainee peer collaborative teaching should be beneficial this shouldn't be combined with additional teacher contributions, perhaps a limit of two "teachers" sharing one class is a suitable maximum.

Question (v) enabled the differences in perceptions between trainees, subject and college mentors to an end of teaching practice review, the college's Tri-Partite Review, to be considered. The same twelve questions were asked of the three parties enabling the findings to be triangulated. In summarising the data it seemed sensible to look for patterns of similarity and difference between the three groups. An example of how the data was collated is shown in appendix 10. In this way aspects that were agreed upon by all three parties were identified along with opinions expressed by just one or two of the parties. This framework for data presentation enabled suggestions for improvement, informed by the evidence, to be made. These suggestions would be sensitive to the differing perceptions and needs of students and their mentors. They are summarised in table 10.18, on the next page.

Table 10.18. A comparison of similarities and differences from trainees, subject mentors and college tutors about the Tri-Partite Review (TPR).

Question Number (see appendix 6)	Similarities – points mentioned by all three groups	Differences – points mentioned by one or two groups
1 (location of TPR)	A private, quiet place. There should be no interruptions.	There should be a break after the lesson debrief, before the TPR. (Trainees)
2 (duration of TPR)	Very variable but cover for 1 hour should be arranged. The modal time for a TPR was 40-45 minutes.	The TPR should not be on the last day of the placement. (Trainees) The lesson debrief and TPR should not occur in the lunchbreak. (Mentors) There's a real problem with the amount of time I can give. (Tutors)
3 (The value of meetings before the TPR)	No common ground. Opposing viewpoints were expressed from <i>within</i> both trainee and college tutor groups.	A mentor/tutor pre-meeting could lead to “ganging-up” against the trainee. (Trainees) A meeting between the mentor and tutor should take place before the review. (Mentors) All parties should come prepared for the session. (Tutors)
4 (Focus of TPR)	The TPR should focus on the summary document i.e. the key strengths and areas for development. There's not enough time to consider all sections of PD3.	The TPR should be “positive” and suggest continual improvement through target setting. (Mentors)

5 (role of <i>college</i> mentor)	The college mentor should lead but not dominate the TPR.	The college mentor should support the trainee. (Trainees) The college mentor should support the trainee and the subject mentor. (Mentors) College mentors should come into school more often. (Mentors) College mentors should challenge trainees and ensure equality of voices. (Tutors)
6 (The distribution of talking-time in the TPR)	This should be about equal but with the trainee taking the lead. Modal distribution of time was 44 (trainee) : 34 (mentor) :22 (tutor)	It depends on personalities and the situation. (Trainees) College tutors should talk the least. (Trainees and Tutors) A short meeting of mentor and tutor should occur after (lesson) observation before the review to find common ground. (Mentors)
7 (Should the TPR check standards for QTS?)	The Professional Development (PD) forms are designed to do this.	
8 (Should the TPR encourage reflection?)	Yes, the TPR should encourage reflection.	
9 (The use and value of the Tracking	The Tracking Document isn't used or valued much.	The TD just repeats PD3. (Trainees) Trainees don't appreciate the

Document)		value yet – but they will, as evidence is required for job applications and interviews. (Mentors)
10 (Discussion of the Tracking Document)	There is very little discussion of the student's comments in the Tracking Document.	<p>The TD should be a private document. (Trainees)</p> <p>More guidance is needed on how to use it. (Trainees)</p> <p>The TD needs to be available earlier. (Mentors)</p> <p>The TD is not used at all. (Tutors)</p> <p>The TD is bureaucratic nonsense. (Tutors)</p> <p>Let's abandon it. (Tutors)</p>
11 (Thoughts on the amount and the structure of the TPR paperwork)	<p>There is too much paperwork.</p> <p>The paperwork is repetitive.</p> <p>We need just one document (not PD3 and TD).</p>	<p>Much of the paperwork is unclear. (Trainees)</p> <p>The paperwork has been written for course assessors and not for the benefit of the trainees. (Trainees)</p> <p>Incorporate the PD forms into the Tracking Document to minimise administration, paperwork and repetition. (Mentors)</p> <p>There's a lot (of paperwork) but it's probably necessary. (Tutors)</p> <p>The PD forms always arrive late for the review and I never get to sign them. (Tutors)</p>

12 (Other points related to the TPR)	None	<p>The Tracking Document is needed from the start of the course. (Trainees)</p> <p>Trainees should be released from lessons for a TPR if this provides a better time. (Trainees)</p> <p>More individual tutorials with the college TP supervisor are needed. (Trainees)</p> <p>Subject Mentors should suggest / arrange the time of a TPR. (Mentors)</p> <p>Overall it's (the TPR) useful. (Tutors)</p> <p>PGCE tutors need more hours to be allocated to the TPR process. (Tutors)</p> <p>How do we encourage all students and all mentors to do the necessary preparation (for a TPR meeting)? (Tutors)</p>
--	------	---

Differences in the perceptions of Trainees, Subject Mentors and College Tutors

A key aspect of this study was to triangulate data from trainees’ subject mentors and college tutors to twelve questions concerning the end of teaching practice review (Tri-Partite Review). By providing each of these groups with the same questions role-specific data was collected with respect to this mentoring process. If differences in opinions and values existed between the parties then future PGCE Programme Planning would benefit from hearing trainee as well as school mentor and college tutor opinions. In such a way

PGCE Programme Planning could respond to contributions from all three parties. As mentioned earlier the trainee perspective appears to be generally unknown, through *formal* data collection events at present

Data from the TPR study suggests that there are some differences in perceptions over the organisation and purpose of the review process between the three parties. These differences show that there are issues important to some parties that may have much less value to other parties. In order to enhance the value, to trainees, of the TPR all participants need to be aware of the opinions of the different stakeholders. There were, as shown in table 10.18 considerable areas of agreement too. Those aspects that were perceived differently by trainees, Subject Mentors and college tutors are explored with conclusions to the findings (shown in italics) followed by evidence. After the comments made by trainees or mentors the respective stimulus question (lodged in appendix 7) is shown in brackets.

Trainee- specific perceptions

Trainees appear to want more personal support and reassurance. They would appreciate more time for individual discussion about their teaching in college. It appears that reflective practice is, generally, seen as valuable but time and strategies to help this happen more would be useful.

(i) Some trainees feel they would benefit from more reassurance.

A number of comments made by trainees suggested that more support and encouragement in their teaching would help them. The stressful nature of early teaching experiences, typically classroom survival or competence in classroom management (Fuller and Brown 1975) and of the end-of-practice assessment process probably contribute to this. Examples of trainee comments that suggest this conclusion are:

Mentor should sit on the same side for support, (Qu1)

A subject mentor/college tutor pre-meeting could lead to “ganging-up” against the student, (Qu3)

The college tutor should offer support and constructive criticism, (Qu5)

The Tracking Document should be a private document for the student and shouldn’t be altered, as occurred in some cases, by over-critical mentors, (Qu10).

A student wants to know their likely pass / fail status, (Qu.12).

(ii) Trainees need more time to be planned and set aside for discussion.

Individual trainee – mentor discussions are important in both school and college. Examples of trainee comments that suggest this conclusion is appropriate for the Tri-Partite Review are:

There should be a break after the lesson debrief before the Tri-Partite Review, (Qu.1)

The Tri-Partite Review should not be on the last day of a placement, (Qu.2).

Some trainees indicated, as a criticism, that their end-of-practice teaching reviews had been undertaken on the last day of the teaching practice. Reviews on the last day may create more pressure for the trainee by adding to those extra duties needed on the last day of a teaching placement. TPRs on the last day of a teaching placement would also restrict the opportunities for any post-review discussion, in the school setting, with school mentors and other teachers. Clearly it would be better for the trainee if the Tri-Partite Review did not take place on the last day of the teaching practice.

The following comments from students suggest that they need to be active participants in discussion and that, in some cases, the review meetings may have been too dominated by college tutors:

The college tutor should lead, but not dominate the review,
(Qu.5)

Ideally, the student should talk the most, (Qu.6)

Students should be released from lessons if this provides a
better time (to meet), (Qu.12)

There may be a need to help some trainees in taking a more active role in the review meeting. This would be helped if the three parties knew each other better. Some of the trainees (a minority) had college tutors who met them only in connection with their teaching practice. In these cases it would appear that more individual discussion between trainee and college tutor would be helpful in college, as the following trainee comment suggests:

More individual tutorials with the college tutor in college time
are needed, (Qu12).

Such actions should help to develop the trainee-mentor relationship and develop the trainee's confidence to participate more in a Tri-Partite Review meeting.

(iii) *Generally trainees value the opportunity for reflection but they may need guidance on how to reflect.*

Examples of trainee comments that suggest this conclusion is appropriate are:

(Reflection) is valuable but not sure how, (Qu.7)

The Tri-Partite Review makes you think about your targets,
(Qu.12).

Reflection is one's ability to bull not teach, (Qu.7).

The last was given by an academically well qualified, Science, candidate, who did well on the PGCE course and was one of the first to obtain a teaching post. This shows that not all trainees, including "good" trainees acknowledge the value of reflection at this stage in their career. Nevertheless the Tri-Partite Review may be a valuable opportunity for a trainee in helping them develop those attributes needed for 'reflection on practice' (Schon, 1983, 1987).

Subject Mentor- specific perceptions

The specific aspects from this group tend to suggest that Subject Mentors should be involved in the planning of review meetings, that some of them appreciate support from college tutors and that they perceive trainees as having only minor involvement in the Tri-Partite Review process.

- (i) *Subject Mentors need the review to occur at a suitable time over which they have some control.*

Finding a suitable time to meet for a Tri-Partite Review is difficult. Trainees have already suggested that they need a break after the lesson debrief before the review. Subject Mentors also support this (Qu. 12), which indicates an empathy with the trainee perspective. The use of a lunch-break provides the hour of time considered suitable for setting aside for a review (Qu.2) but this is important relaxation, preparation and eating time. In some schools lunchtime activities, which could involve the trainee or mentor, occur. Examples of Subject Mentor comments are:

Lesson debrief should not be in the lunchbreak, (Qu.2)

A pre-meeting would be useful but there are timing / cover problems, (Qu.3)

There should be a break for the student (before the review) to relax, (Qu. 12)

(ii) *Subject Mentors value support from college tutors*

A few comments suggest that the Tri-Partite Review process is stressful for some Subject Mentors and that the college tutor could help by offering support to them:

(A Subject Mentor / College Tutor pre-meeting provides) an opportunity to meet without the student (Qu. 3)

The College Mentor should be supportive of the student and Subject Mentor, (Qu. 5)

A short post-lesson observation meeting between the Subject Mentor and College Tutor should take place prior to meeting with the student – to find common ground, (Qu.6)

(iii) *Subject Mentors thought trainees rarely had a lead in the Tri-Partite Review*

Although a few comments from Subject Mentors indicated empathy with the trainees and encouragement for them (responses to qus. 4, 5, 12, appendix 7) it appears that trainees had, at least in some cases, a low profile in the Tri-Partite Review. This conflicts with the recommendations for the role of the trainee in the review process (responses to qu.6, appendix 7), where all parties suggest that the trainee should take the lead. This suggests that specific thought needs

to be given to introduce strategies and to modify mentor-trainee relationships to encourage trainee contributions in the Tri-Partite Review. One subject Mentor said, “Trainees seldom had an input or led the Tri-Partite Review” (response to qu. 12, appendix 7) and this supports the claim for the greater involvement of trainees in the review meeting.

College Tutor-specific perceptions

The specific points of difference from this group principally emphasize time and administrative aspects.

(i) Concerns over a lack of time

A number of comments made by college tutors suggest there is insufficient time available for them to undertake a Tri-Partite Review properly. Some example comments from college tutors are:

There’s a real problem with the amount of time I can give,

(Qu.2)

(There are) time problems with a pre-meeting, (Qu.3)

PGCE tutors need more hours to be allocated to the process,

(Qu.12)

(ii) The value of the paperwork

There were big differences between the college tutors in the perceived value of the administrative aspects of the Tri-Partite Review. Most thought that there was a lot, or too much paperwork (Qu.11), an opinion shared by the other groups. However, some of the college tutors considered the paperwork to be necessary (Qu.11). Others thought the Tracking Document in particular created too much repetitive bureaucracy (Qu.9). It would be interesting to see if this divide of opinion reflected comments from the authors and users of the documentation respectively.

C. Reflective practice

Question (vi) investigated trainees' actions and values with regard to reflective practice. The questionnaires, interviews and observational records provided an insight to this question. In the interviews a series of questions were used to orientate trainee thinking and provide data on trainees' values and actions to reflective practices. In college, at the end of the first teaching practice, trainees were asked *when* they reflected on their teaching. The most common responses were, "all the time (3)" or, "at home at the end of the day (2)". Others mentioned reflection occurring during their journey to school, in bed, after the lesson or with peers. Two trainees thought they were too busy whilst at school to reflect in detail. In most cases reflection on teaching was occurring on and off school premises. When asked *how* they reflected on their teaching most (6) said that this was done by talking with peers and mentors. Five trainees said that writing evaluations of their lessons achieved this whilst one trainee said that they didn't write evaluations but made mental notes.

As to the information recorded trainees were asked *what and where* were their reflective comments recorded. Most (4) made changes, as annotations to their lesson plans, three trainees said that they made mental notes and two trainees said the comments were recorded in their lesson evaluations. Finally, trainees were asked *why* they reflected on their teaching. Four trainees said reflection helped them to de-stress partly by sharing their problems. Two trainees said that the process of reflecting helped them to learn about teaching better and two trainees said that they only did it because the course required it. Pulling this data together an overview of PGCE trainees' values and actions at the mid-point in their training can be constructed. It appears that PGCE trainees reflect in school time to some extent but the majority of their reflection occurs elsewhere. For most, reflection is achieved through discussion in which peers and mentors play an important role but personal written lesson evaluations help with reflection too. Trainees record their reflective thoughts by making annotations to lesson plans and by comments in their lesson evaluations. The value trainees saw in reflection was to help trainees manage their stresses and

problems in teaching as well as helping them to learn to teach better. Clearly, not all trainees saw value in formalised reflections some said that they relied on, “mental notes”. Such “mental notes”, made in a busy teaching practice, might easily be forgotten. A few trainees undertook reflection only because the PGCE course required it of them.

In the interviews, near to the end of the course, trainees were asked to comment on any changes that they made to the way they reflected in their second teaching practice. Generally trainees wrote less, they made use of bullet points to summarise key points and tended to discard the multi-point post-lesson proformas provided by the college. Three trainees said that even though they wrote less they thought about their teaching more in the second teaching practice. Two trainees said that they were more concerned with the quality of pupil learning in the second teaching practice. Thus reflective practice appears to become more condensed in its written form in the second teaching practice but trainees say they think about teaching more than in their early teaching. For some there is a greater concern with the quality of pupil learning than occurred in early teaching reflections. The vast majority of trainees (8) said that the reason they made changes to their reflective actions was to save time as the greater teaching load of the second teaching practice put time pressures upon them. The most frequently made other comments were that discipline and class control issues were not as much a problem as they had been in early teaching when pupil behavioural matters, had dominated early evaluations. Reflection on specific points was seen by some as more helpful than the general descriptive accounts that had been written in early teaching.

In the observational studies trainees’ actions and value of reflective practice were to be noted by:

- the evaluatory comments made by trainees in their Teaching File
- the documentary preparation and planning brought by trainees to the review meeting.

- the responses trainees showed with respect to engaging with reflective discourse.

Only one trainee presented their Teaching File to the Subject Mentor and college tutor in the Tri-Partite Review meeting. It was not examined. The Teaching File was not asked for in the other seven cases. Thus, in eight cases, documentary evidence of trainee reflective practices, as shown by their lesson plan annotations and evaluations, were not examined. Clearly, the review meeting did not address, or emphasise the value of formalised trainee reflective practice. The college's definitive programme document states that:

central to the programme's philosophy is the desire to produce
teachers who think for themselves

(St. Martin's College, 1998, p.6)

In addition one of two desired learning outcomes given in the same document states:

....at the end of the course trainees will be able to analyse and reflect
upon aspects of their teaching

(St. Martin's College, 1998, p.8)

In order to encourage and develop reflective practitioners the examination and discussion of their teaching file would seem important in the review meeting at the end of a teaching practice. Trainees were asked to complete and bring a variety of documents to these review meetings. The production of this, suitably completed documentation, could be used as one indicator of the value trainees place in reflection. Preparing documentation about their teaching requires trainees to think and reflect on their practice prior to the Tri-Partite Review meeting. Only two of the eight trainees had all the necessary documentation completed, others brought part or incomplete material.

Mentors did not see this as a serious omission. In two cases mentor-acknowledged good classroom performance by the trainee was used to counterbalance weaknesses in the trainee's organization, planning and paperwork. One mentor said, "X ...you're a really good teacher but sloppy and disorganised with your paperwork". The data from these two focal observations suggests that mentors in the end of practice trainee review sometimes devalue written reflective practices. Such a low-profile approach to formalised reflection must lead trainees to conclude that experienced teachers therefore place little value in such record-keeping. In terms of the active involvement of trainees in reflective discussions in the meeting I noted attempts made by mentors to engage the trainee in discussions that constructed new understanding of phenomena. I recorded whether mentors made trainees think about and examine their teaching from different perspectives, which could lead them to propose recommendations for new actions. The evidence was divided equally. In four cases college tutors, rather than school mentors, helped the trainee to reflect on their practice and the trainees seemed keen to do this. In another four cases there was limited scope for discussion with the college or school mentor directing the trainee to the "right answer". In one case there was a difference in approach between the college and school mentor. In this way the Subject Mentor continually intervened with answers, which prevented the trainee from thinking and reflecting on the issues in question. These mentor interventions were in spite of the college tutor's attempts to encourage the trainee to reflect. Consequently, the involvement of trainees in reflective discussions during their end of practice review meeting seemed more dependent upon the attitudes of mentors than trainees and thus did not match the declared aims of the programme, to encourage the development of reflective practice in trainees. In some cases reflective discourse that generated trainee thinking about teaching was promoted whilst in others such reflection was inhibited with trainees being steered by 'correct' mentor prescription.

Although not a mandatory requirement of the college’s PGCE course, reflective diaries are recommended in course handbooks. A greater emphasis and use of these is made for the case of MFL trainees than is so for Science trainees. The questionnaires provided data on reflective diaries. Keeping a reflective diary was perceived as very valuable both early in the course (1.9) and at the end of the course (2.0) by *those trainees who kept them*. Trainees said that diaries helped them to do such things as reduce stress / feel better, sort problems out, remember things better and think more about pupil learning. Table 10.19 shows the frequency and variety of comments on the value of reflective diaries.

Table 10.19. Trainees’ perceptions of the value of keeping reflective diaries

PGCE trainees	Most frequent responses
Science	Helps you feel better / reduces stress (4) If you have a problem you can sort it out (4) Identify successes (3) A reminder of things (2) You can see pupils learning better (2)
Modern Foreign Languages	You remember what worked well, what didn’t and why (8) It stops you forgetting things (4) Helps you progress in your teaching (4) Informs future planning (3) You continuously evaluate (3)

Table 10.20 below shows strong subject differences in trainees’ practices of keeping reflective diaries. It also shows a clear trend to stop keeping reflective diaries by the end of the PGCE course. If this trend is extrapolated it seems likely that most qualified teachers will not keep reflective diaries. Thus,

reflective diaries could be viewed, by many experienced teachers, as something that *might be* maintained at an early stage in a teaching career but would be discontinued after qualified teacher status had been achieved and full-time teaching began.

Table 10.20. The proportion of trainees keeping reflective diaries

PGCE trainees	% keeping reflective diaries in Early Teaching	% keeping reflective diaries at End of Course
Science	25	13
Modern Foreign Languages	81	62

A summary response to question (vi), “What are trainees’ actions and values with regard to reflective practices?” can be formulated from these data. Trainees undertake a variety of reflective actions. They are required to reflect on their teaching *in writing* with annotations on lesson plans, lesson evaluations, reflective diaries as well as the completion of other programme documents such as Professional Development Forms and The Observation of Teaching and Learning Booklet. Trainees also reflect by *thinking and talking* about teaching, or as some said through the making of “mental notes”. This personal discussion is supported by interpersonal reflection through discussion with peers, mentors and other teachers in school. *Reading* the comments made by mentors on lesson crit sheets, Professional Development Forms, Coursework Assignments constitutes another form of trainee reflective action. Whilst some reflection occurs in school or college a lot takes place at home or during the journey to and from work. Trainees say that reflective practices are valuable to them, principally by helping them to manage the stresses and problems in their teaching as well as helping them to learn how to teach better. Written forms of reflection also establish a record of successes and failures in lessons and prevent trainees forgetting things. Reflective diaries were popular with MFL but not Science trainees (table 10.20). In both cases the proportion

of trainees keeping diaries near to the end of the course had fallen compared to their early teaching. Possibly the purposes fulfilled by reflective diaries had been achieved for many trainees by the end of the course. Alternatively there may have been less emphasis on keeping and discussing reflective diaries later in the course and some trainees may have stopped keeping them as a consequence of this. Another reason could be that reflective diaries might be seen as ‘props’ for teaching that are not used by experienced teachers and the novice teacher needs to discard this habit in order to progress professionally. Experienced teachers, on the ‘front line’ (Eraut, 1994), need to be able to reflect and act more rapidly than the thinking time and time to write reflective comments would allow. As such, reflective diaries may have little value for full-time classroom teachers. Reflective diaries may have value for trainee teachers who have the time between lessons to reflect on earlier teaching and make written records. Time demands could be a large influence on the keeping of diaries. As the amount of solo teaching builds in the course more time is needed for lesson preparation and marking. If trainees reduced or stopped writing reflective diaries this would release some time to their other, increasing, teaching duties.

Question (vii) compared the perceptions, on reflective practices, of the 2000-2001 Science trainee cohort with the 1995-1996 and 1997-1998 cohorts. I had undertaken research about PGCE Science trainees’ valuing of reflective practices in 1995 and 1997 through questionnaire surveys. This was before the ITT requirements of DfEE Circular 4/98 had been introduced. I repeated the same questions in this study to see if trainees’ perceptions of the importance of reflection had changed. Table 10.21, on the next page provides a comparison of the data.

Table 10.21. The importance of factors encouraging the development of reflective practices in PGCE (sec) Science trainees.

Data from the 1995-96, 1997-98 cohorts (N = 83) are shown with the 2000-01 (N = 48) cohort at early and end-of course (late) stages. The questionnaire statements concerning reflective practice are shown in italics and the mean scores of the trainee responses in bold, on the right.

Key – score value				
1 - 2	=	this issue is <i>important to very important</i> to trainees		
2 - 3	=	this issue is <i>satisfactory to important</i> to trainees		
more than 3	=	this issue is <i>less than satisfactory</i> to trainees.		
		1995 + 97 cohorts	2000-01 cohort	
		(N = 83)	(N = 48)	
		Combined	Early	Late
<i>Discussing the nature/quality of a lesson with experienced teachers/tutors</i>		1.4	2.1	1.7
<i>Observation of experienced teachers "in action"</i>		1.6	1.5	2.7
<i>Reading your lesson crits made by experienced teachers/tutors</i>		1.7	1.3	1.3
<i>The helpfulness of discussions with the Subject Mentor</i>		1.7	1.8	2.0
<i>How helpful have discussions with your peers been in encouraging reflection on your teaching?</i>		1.8	1.6	1.7
<i>The importance of discussion with other teachers 'in school'</i>		1.8	1.9	1.9
<i>The importance of reflective practices in the PGCE course.</i>		1.9	2.1	1.9
<i>The importance of discussion with your College Tutor</i>		1.9	1.8	2.2
<i>How important are personal, formal lesson evaluations to you?</i>		2.3	1.8	2.2
<i>How important has the reflective diary been?</i>		2.4	1.9	2.0
<i>The helpfulness of discussions with the Professional Mentor</i>		2.9	2.8	3.0
Overall mean score		1.9	1.9	2.1

A summary response to question (vii), “How do Science trainees’ perceptions of reflective practices in the 2000-2001 cohort compare to 1995 and 1997 Science cohorts?” can be framed. Little has changed in the responses of trainees to these questions over the three to six year period. The overall mean values are extremely similar and variation from the different cohorts, or between stages in the trainees’ training show little difference. Reflective practice, as judged by the response to these questions, is seen as important and valuable to PGCE Science trainees with overall mean scores of 1.9 to 2.1. Out of the twelve questions asked the *variability of mean scores within any question* was equal or less than 0.5 in ten of the cases. There was just one question where the variability of mean scores differed by more than one and this might suggest a noteworthy change in trainee reaction. This case concerned trainees’ valuing of the observation of experienced teachers at an early (rated 1.5) compared to late (rated 2.7) teaching stage in the 2000-2001 cohort. Although most trainees had said that some teacher observation should continue throughout the PGCE course it was obviously more important to trainees in their early teaching. Solo teaching was perceived as the most valuable strategy later in the PGCE course.

Qu.(viii) explored how the time available to trainees during the PGCE course and mentor support affect reflective practice? In the questionnaires trainees were asked how much time they spent reflecting on and writing a lesson evaluation. Trainees are required to write evaluations of all of their lessons. These constitute an aspect of reflective practice. The time spent writing a lesson evaluation varied between subjects and phases in the PGCE course. MFL trainees, on average, spent nearly 50% more time over reflection and writing lesson evaluations than their Science peers. At the end of the course trainees from both subjects had reduced the time spent reflecting on and writing a lesson evaluation by half. However, a very large intrasubject variation in time was also observed (see table 10.22).

Table 10.22. The time trainees spent reflecting on and writing a lesson evaluation.

PGCE trainees	Time (mins) spent reflecting on and writing a lesson evaluation during Early Teaching	Time (mins) spent reflecting on and writing a lesson evaluation at the End of Course
Science	23.2 +/- 14.3 (range 1 – 60)	11.8 +/- 8.5 (range 0 – 40)
Modern Foreign Languages	34.2 +/- 15.4 (range 15 – 60)	15.1 +/- 7.1 (range 3 –30)

MFL trainees were typically spending more time on these activities than Science trainees. This could be influenced by the length of time that they were taking to plan for their teaching. The time spent preparing for one hour of teaching varied considerably between subjects and stages in the course. Table 10.23 shows the summary data for lesson preparation times. Trainees were asked, in the questionnaires, how long they spent preparing for one hour of solo teaching.

Table 10.23. The time trainees spent preparing for one hour of teaching.

PGCE trainees	Time (mins) spent preparing for 60 minutes of teaching during Early Teaching	Time (mins) spent preparing for 60 minutes of teaching at the End of Course
Science	270 +/- 130 (range 45 - 360)	49 +/- 39 (range 15 - 195)
Modern Foreign Languages	156 +/- 78 (range 40 – 300)	75 +/- 37 (range 20 - 180)

In early teaching Science trainees were, on average spending nearly two hours extra for the preparation of a lesson than MFL trainees. Surprisingly, at the end of the course, this feature had reversed with MFL trainees, on average, spending 50% more time preparing for a lesson than Science trainees. The change in preparation time for Science trainees from, on average, 270 mins to 49 mins represents a five and a half fold reduction compared to a two fold reduction for MFL trainees.

In order to see if time pressures impede trainees' opportunities and time for reflection and writing lesson evaluations a typical PGCE trainee's weekly workload was estimated. The figures were based upon data provided by trainees (solo teaching, lesson preparation, lesson observation, reflection/evaluation time) and from estimates I made (marking, college teaching, mentor meetings). Firstly, the number of hours per week worked by PGCE trainees in December, at the mid-point of their first teaching practice, was determined. This was a phase in the course where trainees spent four days in school and one day in college each week.

Average for Science trainees:

8h college + 5h teaching + 5h marking + 22.5h preparing lessons + 2.5h lesson evaluation + 2.5h writing reflective diary + 2h mentor meetings + 3h observation/discussion + 2h other meetings = *52.5h per week*.

Some trainees also have up to 9h weekly travel time = *61.5h per week*.

Average for MFL trainees:

8h college + 5h teaching + 5h marking + 13h preparing lessons + 2.5h lesson evaluation + 2.5h writing reflective diary + 2h mentor meetings + 3h observation/discussion + 2h other meetings = *43h per week*.

Some trainees also have up to 9h weekly travel time = *52h per week*.

Thus, PGCE trainees in the early stages of their solo teaching have long working weeks, resulting mainly from the time taken in preparing their lessons.

Science trainees spend longer preparing lessons than MFL trainees and this may be due to the subject knowledge, Health and Safety and practical work demands of Science (e.g. all practical work needs to be tested before use in class). On average a Science trainee's working week exceeds 50 hours and such a workload is likely to inhibit the desire to spend even longer reflecting on lessons. A number of Science trainees were spending over 60 hours per week on their PGCE studies at the beginning of their solo teaching. This time data has not been calculated before and forms an important element in any discussion over time for reflection as well as time for relaxation.

Secondly, the working week of PGCE trainees was established for May, at the mid-point of second teaching practice. This was a phase in the course where trainees were wholly school-based.

Average for Science trainees:

12.7h teaching + 8h marking + 10.5h preparing lessons + 2.5h lesson evaluation + 0h writing reflective diary + 1h mentor meetings + 0h observation/discussion + 3h other meetings = *37.7h per week*.

Some trainees also have up to 9h weekly travel time = *46.7h per week*.

Average for MFL trainees:

11.7h teaching + 8h marking + 15h preparing lessons + 3h lesson evaluation + 3h writing reflective diary + 0h mentor meetings + 0h observation/discussion + 3h other meetings = *43.7h per week*. Some trainees also have up to 9h weekly travel time = *52.7h per week*.

Near to the end of their course trainees, in Science, had reduced, on average by 28%, the time they spent working for their PGCE each week. Interestingly, over this same period MFL trainees had not changed the duration of their working week. As more solo teaching was taken on by trainees modifications occurred in the time taken to prepare lessons. Science trainees made huge

reductions (5.5 fold reduction) in the time that they spent preparing for lessons and on average reduced their working week by 15 hours from the early teaching figure. Interestingly they did not increase the time spent reflecting on lessons and writing lesson evaluations – this was half the time spent earlier in the course. The overall time spent each week reflecting on lessons, including the writing of lesson evaluations, remained the same for both subjects throughout the course. However in the second teaching practice trainees were undertaking the solo teaching of many more lessons than at their early teaching stage, before Christmas. Consequently trainees, in both subjects, reduced the time spent reflecting on individual lessons compared to earlier on in the course. In a similar manner to the case of reflective diaries an extrapolation of such a trend suggests that most qualified teachers will not formally reflect on their lessons and write lesson evaluations. There may simply not be the time *or perceived value* in such reflective practices. Success for trainees on the PGCE course therefore continues in a climate of reduced formalised reflection on their teaching as reflective diaries, reflecting time and writing of lesson evaluations decrease or cease.

D. Professional Development

Qu. (ix) was concerned with trainees' perceptions of their professional development needs in the PGCE course. This question was explored through the late teaching questionnaire. Trainees were invited to score and comment on the help that they had obtained from the PGCE course in terms of subject knowledge, professional preparation and their confidence to begin a teaching career (questions 5-7). This data provides perceptions on the professional development needs from trainees near to the end of their initial training.

Trainees' perceptions of their gain in knowledge and understanding of their specialist subject was explored. There were noticeable differences in the responses from Science and MFL trainees. Whilst Science trainees considered

that their subject knowledge had been helped a lot by the PGCE course with a score of 1.9(1) this was not the case for MFL trainees with a score of 3.1(3), indicating OK. The trainees’ comments in the open section of the questionnaire helped to illuminate the reasons for such subject differences in the perceived value of subject knowledge. These are shown below in table 10.24.

Table 10.24. Trainees’ perceptions of how helpful the PGCE course was on the development and understanding of their specialist subject knowledge

PGCE trainees	Most frequent responses
Science	<p>Very good method sessions in college (10)</p> <p>All aspects of the course very useful (8)</p> <p>Excellent advice on how to teach topics (5)</p> <p>Good to refresh my dated subject knowledge (2)</p> <p>Helped me to think like a teacher (2)</p>
Modern Foreign Languages	<p>My subject knowledge hasn’t developed (11)</p> <p>My knowledge of how to teach and apply my subject has developed well (9)</p> <p>No / not enough focus on Italian (5)</p> <p>I learned a lot (3)</p> <p>I will never teach in England (2)</p>

It seems that Science trainees received and highly valued the subject knowledge components in their PGCE course, especially those aspects provided in the college method sessions i.e. Biology, Chemistry and Physics. They also valued the emphasis placed on the application of subject knowledge to pupil needs. A few mature trainees were helped by the updating that took place to their subject knowledge. Consequently the PGCE Science course was perceived as providing its trainees with helpful subject knowledge and

guidance on how to teach their subject to secondary age-phase pupils. MFL students did not consider that their PGCE course had helped to develop their subject knowledge but it did deal well with how to teach pupils through the application of subject knowledge. Five MFL trainees said there was insufficient focus on Italian. Two trainees, who from interview conversations were probably foreign national students, were unhappy with the organisation of the English school education system. They took this opportunity to say that they would never teach in England! Consequently the PGCE MFL course in the trainees' opinions is principally concerned with showing how to teach MFL and not with developing subject knowledge. It would appear that several trainees would appreciate subject knowledge of Italian in the PGCE course. This difference in what the PGCE course provides in each subject may reflect a variety of factors. It could be that Science trainees, who at Key Stage 3 are required to teach all the Sciences, often lack the subject knowledge required to do this whereas MFL trainees become single language specialists and feel confident with their subject knowledge during the PGCE course. Indeed for many on the MFL course English was their second language. The nature of the school subject may have an influence. In Science some trainees may feel that the need to know the subject is more important than the need to know how to teach the subject. For MFL trainees subject knowledge may be perceived as strong leaving the emphasis for the PGCE course on how to teach the subject. Typical Science teacher personalities may be such that an emphasis in early teaching on knowing as well as knowing how is more important than it is to MFL students at this stage. The academic profiles of Science and MFL trainees at entry to the PGCE course are another factor that has not been explored. It could be that Science trainees have, on average, poorer academic qualifications than their MFL peers do. Finally, the subject tutor teams and school mentors, with whom they liaise, will have imposed their own beliefs on the content and emphasis of their specialist subject within the PGCE course and have influenced trainee opinions to some extent.

Both Science and MFL trainees had found the PGCE course of considerable help for their professional development as a teacher with scores of 1.9(1) and 1.6(1) respectively. With the exception of eight MFL trainees who said they were confident with Key Stage 3 teaching but needed more Key Stage 4 teaching subject responses over professional development were similar. The different subject responses have been amalgamated and are shown below in table 10.25.

Table 10.25. Trainees’ perceptions on how helpful the PGCE course was for their professional development as a teacher

PGCE Science and MFL trainees’ responses
I’ve gained a lot of experience about teaching (10)
I feel I can function as a teacher now (8)
A lot of teaching practice develops you professionally (7)
Excellent support / help is important here (5)
(The course) helped me understand what teaching’s about (5)
Gaining confidence helped me a lot (2)
It depends on the school you’re put in for teaching practice (2)

These comments suggest that trainees see the main help for their professional development as teachers comes from experiences of teaching. Such experiences will be provided in the college and school components of the course. School-based activities, which form two-thirds of the PGCE course, are seen as the most important for teacher professional development. This is to be expected as such placements put trainees directly into the teaching environment, the workplace for their future career. Notably the support and help offered to trainees is valuable to their professional development, boosting confidence in two cases and hindering professional development, when absent, in two schools. Thus, in the opinion of trainees near to the end of their PGCE course, suitable professional development requires a lot of school-based work

and solo teaching experiences. This is assisted by college and school sessions where discussion of the application of subject matter to pupils’ learning needs occurs. A mentoring relationship with the trainee that offers support and help to them is also helpful in fostering their professional development.

It was reassuring to find that Science and MFL trainees generally felt sufficiently knowledgeable, confident and self-organised to begin their teaching careers. The trainees self-assessed their teacher qualities with scores of 1.7(1) for Science and 1.9(2) for MFL. The trainee comments, shown in table 10.26, provide more information and have been amalgamated, as they were similar in each subject.

Table 10.26. Trainees’ perceptions on how knowledgeable, confident and self-organised they felt to begin a teaching career

PGCE Science and MFL trainees’ responses
Good / well prepared (20)
I’m not sure how I’ll cope on a full timetable (8)
Teaching practice helped to develop this (7)
I seem to be spending too long planning lessons (5)
OK in some schools / classes but not in rough / difficult ones (5)
I hope the support continues as a NQT (4)
Nervous (3)

Many (20) trainees said they felt well prepared to begin their teaching careers and teaching practice, along with support, had been important in this respect. Twelve trainees had concerns over teaching a full timetable and / or being able to reduce their lesson preparation time. During the major periods of solo teaching, which are the second half of the first teaching practice and the whole of the second teaching practice, trainees are given 60% of an NQT’s teaching time-table. In addition to the new teaching matter there could be lesson observation, additional administrative tasks, coursework assignments, long

daily travel journeys, job applications and interviews to increase demands on trainees. More open acknowledgement, help and support from mentors could alleviate such concerns over time and task management. Projecting ahead to full-time teaching in the NQT year, four trainees said that they hoped such support would continue. The nature of a school's pupil population was another variable that could impede the teaching success of some NQTs as five trainees said that they, "would have difficulties with rough or difficult classes". Bearing in mind that almost half the number of comments made by trainees (25 out of 52) expressed some concerns over their workload, confidence and support to start a full-time teaching career it seems very important that employers are sensitive to these perceptions and that they respond appropriately to them. Offering help, support and guidance to NQTs is important. It promotes the professional development trainees see as important. Such support makes them be and believe themselves to be better teachers, which should result in a higher quality of pupil learning. Additionally, a caring approach enhances trainees' self-esteem and this might help to reduce the loss of new teachers from the profession.

An analysis of this data can illuminate the situation that faces PGCE trainees. This may help to explain some of the trainees' perceptions for suitable teacher professional development. In early teaching trainees spend time in school and in college each week. Most trainees receive a specific 1:1 hour each week with their Subject Mentor. A range of teaching activities are offered (observation, a little collaborative teaching and solo teaching). Trainees have several opportunities to see and speak with teachers and their peers. There is little solo teaching and marking, which is time and 'effort' expensive.

By the second half of the first teaching practice the deployment of trainees and their duties have changed. The course becomes principally and (by January) wholly school-based. The designated Subject Mentor hour is often withdrawn, thus aspects of support, help, advice, constructive criticism often decrease. The range of teaching activities is dominated by solo teaching, which tends to

be a private and very time-consuming process for trainees. An increase in marking of pupil work occurs due to the greater teaching load. The amount of lesson feedback reduces or stops, this being an aspect perceived as highly valuable to trainees. In addition the opportunities to see and talk to teachers and peers are reduced, both of which are perceived as valuable. Some trainees report that this isolation generates anxiety and insecurity. The increased workload, both physical and mental, is noticeable as it affects perceived performance, opportunities to relax and meet friends and the enjoyment / fulfillment of teaching. The rate and extent of change in trainee teaching experiences and the additional demands placed upon them may well be important factors affecting trainee withdrawal.

There are a number of other factors that influence the professional development opportunities and socialisation of trainees into teaching and these serve to generate variability in programme provision. This research shows that trainees are aware of the influence of:

- Type of school (easy/hard classes)
- Nature of college-based course
- Teaching load (contact hours and range of classes taught)
- Travelling time
- Mentoring provision
- Single / double /multiple number of students in same school department

on their early professional development, confidence and commitment to teaching.

Due to such variations in trainee experience a few trainees mentioned an element of “luck” in the PGCE course in terms of the effective training and mentoring gained on the course. The majority of trainees felt the quality of mentoring and professional development was of a very high standard. However, there were sufficient comments made to indicate that a number of trainees, in both subjects, felt “hard done by” on the PGCE course.

A summary response to question (ix), “what are trainees’ perceptions of their professional development needs on the PGCE course?” can be constructed. Near to the end of their PGCE course trainees describe suitable professional development as providing experiences about teaching. School-based activities that put trainees directly into the role of a teacher are the most important but college-based activities were useful too. Help and support from mentors was important in fostering their professional development throughout the course. Near to the end of the course many trainees felt well-prepared being knowledgeable, confident and self-organised to begin their teaching career. However, almost as many had reservations over their workload, confidence and support in the NQT year. Trainees were aware of differences in the school-based experiences offered in the PGCE course. Although these generally promoted their effective professional development there were some school experiences that hindered the progress of trainees.

11. Discussion

This chapter begins by presenting the main conclusions of this study, which are subsequently discussed with respect to the study's research focus.

Secondly, changes in mentoring practice on the college's PGCE (sec) programme that would be of benefit to trainees are considered. The impact such changes have for the practice of trainees and mentors and on the organisation of the school and college-based aspects of the PGCE programme are discussed.

Thirdly, the relationship of published work with the findings of this study is presented with a particular emphasis upon recent, related research and the findings of this research. From September 2002 the requirements for ITT in England are set out in DfES circular 02/02. The differences this may introduce, with respect to the focal areas of this research are considered. Resulting from the empirical research of this study and its contextualisation with recent, related research and DfES 02/02 an Action Plan outlining the implementation of the key recommendations of this study is presented.

In the final sections of this chapter the strengths and weaknesses of this thesis are considered. Opportunities for the dissemination of the research are also discussed. Some dissemination events have already occurred and these have been useful in steering the structure and organisation of the study. These occasions have helped me to think about this research and organise it into a logically structured, coherent document. The dissemination events have allowed me to make new contacts with the prospect of future collaborative research and in addition they have kept me up-to-date in this field of mentoring.

The chapter closes by proposing aspects for future research.

Main conclusions from the findings of this study

The conclusions shown below have been compiled from the findings of this study. They represent theoretical inferences and are thus specific to the institution and programme investigated. An important aspect in drawing together the conclusions has been the need to identify with the focus of the study and to be informed appropriately by the data collected. In order to maintain clear connections with the research focus the conclusions are presented under the focal themes of investigation.

A. Mentoring

- (i) Trainees believe mentoring is an important aspect of their PGCE course.
- (ii) Help and support are the most important aspects of mentoring for trainee teachers.
- (iii) Trainees' value highly mentors who show they care and make time for them.
- (iv) Trainees find discussion with mentors that gives constructive feedback and encourages reflection on their teaching to be the most helpful.
- (v) Student peers are the most helpful mentors.
- (vi) Variations due to solo teaching load, types of classes taught, quality of mentoring provision, nature of college-based subject course, daily home-school travel times and paired teaching placements can generate large differences in the nature and quality of a trainee's mentoring experience on a PGCE course.

B. Mentoring Strategies

- (vii) Trainees see a place for lesson observation throughout the PGCE course, not just in the early stages.
- (viii) There are benefits to trainees and to student retention from pair trainee placements in school departments.
- (ix) The introduction of some peer collaborative teaching could help trainees with their teaching, reduce stress and provide some fun.
- (x) Feedback to trainees on their solo teaching (co-analysis of practice) is seen as important to them and should continue throughout the course.

C. Reflective Practice

- (xi) Trainees may need guidance on how to reflect and make use of reflective practice to improve their teaching.
- (xii) MFL trainees were much more likely to keep and spend time making written reflective notes than Science trainees.

D. Professional Development

- (xiii) Trainees have heavy workloads, especially when the course becomes wholly school-based. This is mainly caused by lengthy lesson preparation times. It is likely that the workload and deployment of time strongly influences the nature of the professional development of trainees.

- (xiv) During the PGCE course trainees modify their practices of lesson preparation and reflection. Near to the end of the course trainees have reduced their workloads by cutting lesson preparation time and by reducing or sometimes stopping formalised reflection activities (lesson evaluations, reflective diaries).
- (xv) Near to the end of the course many trainees felt well prepared to begin their teaching careers. However, almost as many had reservations over their workload, confidence and the support that would be offered to them in their induction year.

A discussion of the main conclusions of this study

The main conclusions of this study, which are presented above, can be explored to provide the framework of the following discussion. Consequently this discussion is structured to respond to the original research questions (table 7.1).

A. Mentoring

Although mentors may have assumed that trainees highly value aspects of mentoring in their ITT course it is helpful to have evidence, from trainees, that clearly supports a trainee perception of the high value of mentoring and clarifies the nature of such provision. Mentors need to realise that *trainees value help and support* as the most important aspects of mentoring. Beginning a new career in teaching requires a caring, nurturing approach where the trainee is given help in a warm, supporting environment. This may require some mentors to protect their protégé initially from the, “front-line of teaching” (Eraut, 1994) and offer a secure and comforting base for them. Time needs to be formally set aside for mentor/mentee discussion. In such discussions the mentee needs to see that they have the complete concentration of their mentor and that the value of the mentoring discussion ranks equally

with the value the mentor puts into their own teaching of pupils. Trainees need to feel that they are given this same access to learning as are the mentor's own classes.

Discussion is important and criticisms need to be offered with constructive, remedial action. This continues the help and support offered to the trainee at the stressful time of initial teaching. *Trainees appreciated mentors' attempts to stimulate reflective processes,* as they preferred to be asked to think about events in their teaching, to be offered alternatives and to consider the implications of pursuing such changes in action. This was in contrast to trainees being given the 'correct' solutions to problems in their teaching.

The significance of trainee peers for mentoring is a very valuable part of the course to trainees and further developments in peer mentoring are likely to be very useful. College-based aspects of the course might offer, for example, more opportunities for collaborative work in teaching simulations, paired trainee college tutorials, joint assignment preparation. School-based aspects that formalise some of the peer interactions could be useful to increase the opportunity and scope for peer mentoring. For example, trainee peer discussion time, shared lesson observation and debrief and some peer-collaborative teaching could all be beneficial to trainees. Such developments in peer mentoring would not involve the mentor with any increase in their mentoring duties, indeed they could reduce mentor duties a little. Another component offered from peer mentoring was that of fun. Perhaps the equal mentor status of trainee pairs reduced some of the teaching, or teaching-assessed, anxieties and provided a more relaxed environment for the trainee. Peer interaction was one of the few occasions fun was mentioned and it seems important to retain this element for motivational as well as stress-reducing reasons.

B. Mentoring Strategies

Opportunities for lesson observation should be offered throughout the PGCE course and not just at the initial stages. In some cases lesson observation stopped when solo teaching dominated the trainee's teaching timetable, this

occurred about half way through the first teaching practice just as solo teaching was beginning. It would appear that the continued observation of just one lesson per week along with subsequent feedback discussion is very helpful to most trainees.

In order to sustain the enthusiasm of trainees and to give evidence of their success and value as teachers, feedback to trainees was seen as important throughout the PGCE course. During the solo teaching phases a number of trainees received little if any feedback on their teaching. Feedback on every lesson taught was considered as too much and possibly too dispiriting for the development of teaching success, leaving insufficient time for the development of trainees' relaxed and individual teaching styles in a "real classroom environment". *One to two lessons per week that were formally observed*, recorded key points on lesson crits, and were discussed with trainees would seem about right throughout both teaching placements.

C. Reflective Practice

The nature and purposes of reflective practice may well vary between stages of teaching expertise as well as in individual philosophies of both the mentor and mentee. The evidence (from those trainees that did formally reflect) suggests that trainee teachers do benefit from explicit, formalised reflective processes such as writing lesson evaluations, keeping reflective diaries and discussing issues of their teaching. It may be that the pace and nature of a teacher's duties means that such formalised reflective processes soon stop because of a lack of need and/or time. Reflective practices, may become less formal as the reflective actions, through experience, become more fluent and subconscious. Nevertheless, many teachers during their training see the creation of opportunities to develop reflective practices as very important. Giving trainees, or making trainees spend, more time over taking stock and prescribing their actions could be useful. Such an approach empowers the trainee and puts them more in charge of their learning. Lunt et al. (1993) suggest that this approach places the trainee more in charge of their studying and adds to their self-esteem as it forces the trainee to prescribe action rather than follow preset

routines determined by others. The differences shown in the practices of Science and MFL trainees in keeping and using reflective diaries need to be considered. MFL trainees were much more likely to keep reflective diaries (81% in early teaching) than Science trainees (25% in early teaching). Those trainees who kept diaries, at least in the early part of the course, found them useful. It may be, initially at least, that keeping and using a reflective diary helps trainees to think more about their teaching and to acknowledge and appraise the significant events in their teaching. In this way the teaching progress is recorded and is seen, by trainees, to develop. It is important that the mentor ensures that a balance between the use of reflection for classroom management or survival (Fuller and Brown 1975) and quality of teaching is maintained. It could be that in the later stages of the PGCE course, such reflective processes become more intuitive and less reliant upon explicit formalised processes. It could also be that, as most experienced teachers do not undertake formalised reflection, this practice needs to be mimicked by trainees as part of the socialisation into the profession. Following the induction year written lesson evaluations and reflective discussions will no longer need to be produced, except in special situations where the lesson or lesson plans are being inspected.

D. Professional Development

Teaching workloads caused concern for many trainees for most of their PGCE course, i.e. from November onwards, which is all except the first two months of the PGCE course. Early course guidance of time demands at different phases in the course and of the strategies to rationalize and deal with such changes would be useful to present to and explore with trainees. This would help trainees to know, in advance, their workloads and to realise that changes in working patterns would be needed as the course progressed. Arising from discussion with colleagues, during some of my research presentations, it is clear that no agreed quantification of trainee workload has ever been established. The majority of trainees spent so long preparing for their lessons at the start of teaching (especially Science trainees) that changes in lesson

preparation and different coping strategies became essential later on, when the teaching load increases. The realisation that a time value for the activities needed to prepare and deliver teaching needs to be set and that as the teaching load builds changes in preparation style and duration for each lesson will have to fall. This should help address some of the trainee concerns of inadequate preparation and their consequent disillusionment with teaching. Towards the end of the course trainees tended to reduce or stop the time that they spent evaluating lessons and formally reflecting on individual lessons. This change in practice has already been suggested as occurring either, because formal written reflection only has value for most trainees in their early teaching, or as a response to the need of trainees to socialise into a profession where formalised reflective is rare. It could also be a response to the increase in time demands needed for lesson preparation and by minimising the time for reflection some time is effectively saved. Whatever the case it is important that new teachers, by whatever means, engage with reflective practices. It seems important that trainees' changes in time-management and their development of teaching expertise affects only the mechanism by which reflection occurs and does not eliminate reflective processes from their activities.

Near to the end of the course it is usual to celebrate success. Coursework assignments have been completed, Standards for the Award of Qualified Teacher Status (DfEE 4/98; DfES 02/02) have been passed, end-of-term walks, dinners, discos etc. have occurred and for most a teaching appointment in the coming academic year awaits them. Although time should be set aside, perhaps in a college-based tutorial, to celebrate their successful completion of the PGCE course, other issues, related to such success, need mention too. It is important for newly qualified teachers to accept that success in the ITT teaching standards is made when each standard has at least achieved a 'competent' (not proficient or expert) level. The commitment to and processes of continuing professional development follow them through their career. At this clearly successful time newly qualified teachers also need to recognise that

for many of them concerns over workloads, confidence and support continue into their teaching careers. Strategies to accept and deal with these issues need to be discussed, as do their opportunities for appropriate future professional development.

Conclusions and recommendations on the end of teaching practice review (Tri-Partite Review)

The following conclusions and recommendations provide a summary analysis of the investigation about the end of teaching practice review (Tri-Partite Review). This research was concerned with a very specific aspect of the PGCE programme but provided triangulated data from trainee, subject mentor and college tutor perspective. If introduced the recommendations should enhance the quality of the teaching practice review process for the majority of trainees, Subject Mentors and college tutors.

A private and quiet place where there are no interruptions should be arranged for the Tri-Partite Review. One hour should be made available for the review and trainees should be released from lessons if this provides the best time to meet. The review should not be arranged for the last day of a Teaching Placement and should not take place in the lunch break. Subject Mentors should be consulted when arranging the time for the review. There should be a break after the lesson de-brief before the Tri-Partite Review begins. Pre-meetings could be of benefit by two parties in some situations but are not universally seen as beneficial. All parties should come prepared for the review.

Possible mechanism for action

A letter to concerned parties could be used to state the needs for rooming, time allocation, preparation and release from teaching. A reply-slip to the letter would acknowledge receipt and confirmation that action would be taken. It

would enable the Subject Mentor to suggest times for the Tri-Partite Review and, possibly, indicate the need for any pre-meeting. Resulting from a presentation of these findings in May 2001 the college's practice, in the PGCE (sec) programme, has been amended to fall in line with the above recommendations.

The Tri-Partite Review should be chaired but not dominated by the college tutor. A supportive, 'positive environment', which focuses principally upon the key strengths and areas for development of the trainee, should be created.

Possible mechanism for action:

College tutors should ensure this occurs.

The contributions made by each party will vary with the situation and personalities involved. The college tutor, as chair of the meeting, should ensure equality of voices but generally the college tutor should talk the least. The trainee, wherever possible, should take the lead and should talk, on average, for twice the time of the college tutor. The trainee should be encouraged to think and analyse their key strengths and areas for development. Prompting, questions and challenge from Subject and College Mentors, in a supportive setting, should facilitate this reflective action.

Possible mechanism for action:

College tutorials, both group and individual, could be used to clarify these requirements and to ensure the trainee comes prepared to talk and reflect on their professional practice. College sessions on the nature of reflective practice and the presentation of models or frameworks for undertaking reflective practice could be included. If the Tracking Document is retained this could be used with Subject Mentors as a base to initiate collaborative reflection. A component of the weekly meeting between trainee and Subject Mentor could be to specifically develop reflective practice. It may well be necessary, perhaps at Mentor Training Days, to explore and develop aspects of reflective practice with school mentors. More individual tutorials in college between the

trainee and the college tutor for teaching practice could help to develop trainees' analysis of their practice and thus promote the development of reflective practices.

The majority of opinion, from all parties, was that there is too much paperwork associated with the Tri-Partite Review. The paperwork was generally seen as repetitive. Some trainees found the paperwork unclear and did not see it as written for their benefit but for the benefit of course assessors. The Tracking Document received the greatest criticism.

Possible mechanism for action;

Recommendations from all parties were to produce just one document for discussion in the Tri-Partite Review. The document needs to be clear and seen as beneficial by trainees. A combination of the Professional Development form and the Tracking Document, or the abandonment of the Tracking Document should ensure a reduction in the amount of paperwork and avoid repetition.

A few issues have not been mentioned above but seem worthy to note.

If a Tracking Document is to be used then it needs to be available from the start of the course and more guidance on how to use it would be helpful to trainees.

Strategies to encourage all trainees and mentors to do the necessary preparation for a Tri-Partite Review need to be considered, although some of the suggestions made above could help to do this.

Overall the Tri-Partite Review was seen as useful. This was also the general opinion, which I formed from my own informal data collection (conversations, observations), during the process of administering the surveys.

The recommendations for change presented in this thesis are based on an evaluation of trainees' perceptions of mentoring arising from this research. They have also been refined with some (n = 12) of the 2001-2002 PGCE

Science trainee cohort through tutorial discussion in the summer term 2002. These recommendations represent views from course members who were in their initial stages of teacher training. It is important to realise that the content and emphasis of an ITT programme also needs to be informed by experienced teachers and mentors in order to provide a wider, more appropriate preparation. These, experienced, teachers are able to see the professional implications that may lie beyond the initial focus of teacher training.

These key conclusions can be used to suggest changes in the PGCE programme, changes that should enhance the quality of mentoring as perceived by its trainees and consequently the extent of trainees' learning and progress as new teachers. Some of the recommendations are relatively easy to implement, needing only changes in awareness of mentors or minor changes in the content or emphasis of the PGCE course. Other aspects are more difficult to change. They may require changes in mentors' philosophies and practices of mentoring. An increase in the time available for observing trainees' lessons and for meeting with them on a one-to-one basis requires a greater time commitment to mentoring. The location and type of school, the teaching timetable and variety of classes contained, the home to school travel times and the single or pair/small group nature of the trainee's departmental placement are also more difficult factors to standardise.

Suggestions for changes in mentoring practice on the PGCE (sec) programme that would benefit the majority of Science and MFL trainees.

In order to help clarify the changes in mentoring practice, suggested as beneficial by the findings of this study, specific information can be directed to each participator. In this way specific proposals for mentors, trainees, college-based and school-based PGCE provision can be identified

For mentors to know and understand

Trainees see mentoring as important. They identify help and support, along with mentors' creating time for the trainee as the most important aspects.

Formal appointments, which rank equally with the responsibility of teaching pupils, need to be made and kept. Constructive feedback encouraging trainees to stop, think, select and introduce modified actions into their lessons are important, reflective strategies. The value of peer mentoring is considerable in terms of trainees making progress, learning from the course and also in providing light relief and ‘fun’, the latter being unmentioned in other areas of the course. There is evidence that placing trainees in pair, or multiple, school departmental placements reduces trainee withdrawal from the PGCE course. Such pair or multiple, teaching placements rarely convey disadvantage to a trainee. Lesson observation as well as feedback has, as expected, most value in the early stages of the course but a small amount of weekly observation and feedback should be continued throughout the course. The *value of reflective practices* may be similar for trainees and experienced teachers but the *styles or mechanisms of reflection* are likely to be very different and greater appreciation of this difference would be useful. At first trainees may find that written lesson evaluations and reflective diaries are very helpful to them. As the course and experience of teaching develops the *time spent* and *style of writing reflective comments* usually changes. Later in the course it is likely that reflective comments will be briefer and may not be written at all. Such changes will vary according to the perceived needs and personality of the trainee. The important issue is that reflective practice should continue, although it is likely to *change in style* as teaching expertise and time pressures develop. Reflective actions should *not be abolished* to save time for lesson preparation *but modified* to suit better the needs of teaching later in the PGCE course. The PGCE Definitive Programme Document (SMC 1998) and Course handbooks (Science and MFL 2000) state the development of reflective practice in its trainees as an important aim. It could be hoped that such reflectivity helps the teacher retain a sense of professional autonomy (Hoyle, 1990) and control within a tightly prescribed Teacher Training National Curriculum (DfEE 4/98 and DfES 02/02).

Mentors need to know how trainees' spend their working time and set reasonable workloads at different phases in the course sensitive to such factors as trainee teaching load, travel times and single or multiple nature of the placement.

For trainees to know and understand

Success on the PGCE course is helped by opportunities to share achievements and feelings with peers. This helps in the construction of self-concept and self-esteem. Realising (like the classes of pupils they teach) that each person is different, that they have particular mentoring needs and classroom experiences is important. Trainees need to be aware of their mentoring entitlement and of the action, without reprisal, that they can follow if they perceive the training provision to be inadequate. From an early point trainees need to be aware and accept that, as their teaching develops, some mentoring tools or strategies will have to change too e.g. the proportion of observation to collaborative to solo teaching; the time available to spend preparing each lesson of solo teaching; the use, style and value of lesson evaluation and reflective diary comments.

Trainees need to realise and accept that as the proportion of their solo teaching builds the time available to plan each taught lesson has to fall. This means that different lesson preparation and coping strategies will be needed as the PGCE course progresses. Trainees need to know and be shown models and styles of reflective practice and encouraged, at various stages, to trial and adopt reflective strategies to help with their teaching and professional development.

Changes in college based provision

College-based Mentor Training could be improved by the inclusion of material on trainees' perceptions of mentoring. This could include a presentation of the key findings and proposed changes from this research along with strategies for the mentoring of adults and the nature and development of reflective practice. The focus of this addition would not be just on the mentoring processes but also on the mentoring relationship needed to create a nurturing mentoring role,

seen by trainees as very important. This suggests that mentoring should include aspects of student counselling skills. With the exception of some recent appointments, college tutors, who act as Subject Mentor trainers, have never received any formal training themselves and should benefit from considering and discussing the above proposals at PGCE tutor development / training days. It would be helpful if all PGCE (sec) concerned college tutors met and worked for some time to consider the nature and projection of mentoring conveyed at mentor training days. The purposes of mentoring for trainees should be seen as creating a supportive mentoring relationship in addition to deploying various mentoring processes. The college needs to reap the benefits shown by peer mentoring in this study. Increasing the practice of pair/multiple departmental teaching placements would be beneficial to most trainees. The advantages offered by pair/multiple school departmental teaching placements for trainees can be shown to benefit both mentors as well as trainees. If the number of paired teaching placements was increased there would be fewer school departments involved in a specific subject each year. Consequently, the subject co-ordination and communication of mentoring would be easier as there would be fewer Subject Mentors and schools for a PGCE Course Leader to liaise with. For example, around 50 Science trainees follow a PGCE course each year. This is equivalent to 25 paired school teaching placements and subject mentors. In respect to current practice, where only some Science trainees have paired placements, the mentor and school numbers involved each year would fall by about one third if a wholly paired teaching placement of trainees was adopted. In such a circumstance it might be possible to select only the “best” Subject Mentor / travel-time schools. “Poor” mentoring schools, or inconvenient travel-time distance schools, could be deleted. As almost three-quarters of the schools were described by trainees as having “good” student mentoring this goal, of using only “good” mentoring schools could, in theory, be achieved.

College tutors would spend longer in the paired placement partnership school departments, therefore helping in the development of school/college links.

Two students per school department generate the equivalent of one half day of college tutor time in the school department per school visit. This would be repeated on four occasions in the year to cover college tutor visits to trainees in school. Therefore college tutors would have two full days per Partnership School per year. In addition, some college tutors would meet Subject Mentors at college-based Mentor Training Days.

Benefits for trainees would occur through support, collaborative teaching, sharing some lesson resources, reciprocal observation and feedback as well as in home to school travel arrangements. Evidence also suggests that the reduced stress levels and increased opportunity of peer discussion contributes to a reduction in course withdrawal as well as an increased feeling of trainee well-being.

However, there could be disadvantages offered by pair/multiple school departmental teaching placements for trainees. Some schools currently share trainees across school departments with a maximum of one per department. A change in practice would be required where school departments operated on a one-year on (two students), one year off (no students) basis if paired departmental trainee teaching placements were to be implemented. A school's staff and parental concerns may oppose the introduction of paired trainee placements. It could be that two students in a school department are perceived as detracting from the quality of teaching of pupils. Additionally, there would be more difficulties for the Subject Mentor when faced with the integration of two, rather than one, trainees into the department.

The Subject Mentor's responsibility for two trainees is clearly greater than for one. This could increase the likelihood of conflict with other roles (e.g. Head of Department) or with time pressures or with lack of any formal (time or pay) acknowledgement for undertaking the role.

In a few, small, secondary schools two trainees per department may be too great. Such paired placements would equal the full-time departmental

specialist staff allocation and could be considered to be too high a trainee to staff ratio for the effective education of pupils and mentoring of trainees.

Changes in school-based aspects of the PGCE Science and MFL courses

Mentors are experienced teachers and it is important for them to be able to empathise with the ‘new teacher’ perspective held by trainees. In addition to starting a new career, the institution, its pupils and staff are all new to trainees. Experienced teachers, having spent several years in the same institution, can easily forget how important transitional turmoil can be to the well-being of the individual. Trainees thought that help and support, offered in a nurturing mentor role, were the most valuable mentor traits. School mentors need to create the space, time and opportunity to talk with the trainee, as this is important to them. These processes and actions help to establish and develop the mentor / mentee relationship. Such meetings need to have the same status as is given by the mentors to their teaching of classes. Mentors need to make trainees think about their teaching and help them to adopt and use reflective strategies. Mentors should remember that beginning teachers use different reflective strategies and styles compared to experienced teachers. As their teaching experience grows changes may occur or may need to be encouraged in trainees’ reflective practices.

Creating and maintaining teaching files / lesson plans / lesson evaluations take a lot of trainee time and thought (especially when compared to the time spent by experienced teachers). This aspect needs to be valued by looking at and discussing such formal lesson planning materials, even though the nature and style of lesson planning / reflection will be very different from that used by most experienced teachers. It is important to trainees for mentors to empathise with their situation and to be able to rationalise lesson materials and strategies appropriate to the beginning teacher.

Observations of lessons should continue throughout both teaching practices with a timetabled opportunity for discussion with the class teacher. Following observation from an inexperienced eye (trainee teacher), subsequently

establishing what was done and why (reflection with the experienced teacher) is perceived by trainees as very important. This practice probably helps trainees see a rationale for lesson preparation and consequently helps them learn how to teach more effectively. The strategy of paired teaching placements should be increased as it conveyed advantages to trainees in terms of learning quality and course retention. Increases in some collaborative teaching could be helpful, especially when these make use of trainee peers for observation, collaborative teaching and reflection.

As solo teaching builds it is important to continue to give some regular feedback on the trainee's lessons. Some of this lesson feedback needs to be done on a formalised, timetabled basis. Continual feedback was important to trainees even to "good" ones. It helps trainees to pick out their areas of strength as well as areas for development. It helps them set work targets and make progress. Such mentor discussion also provides variety and stimulus on the PGCE course.

Some help and guidance on time management, which enables realistic working weeks to be created, is important. The demands of work on the PGCE course compared to those demands for a full time teacher need to be explicit and rationalised. As the trainee progresses through the PGCE course help, support and encouragement for them to change the deployment of time to their teaching duties should be given. Mentoring discussions should cover the changes necessary for the trainee to make in their approach to teaching files, lesson plans, reflective mechanisms, marking etc. The notion that changes will be necessary, due to changes in needs and teaching duties, is an important one and helps some trainees to cope better with the PGCE course.

End of course success should be celebrated but for many lack of time, reservations over work load, the need for continual help and support as an NQT need to be acknowledged. Strategies that could be used to create help and support in the NQT year should be discussed and shown to be important. The benefit of other teachers who helped with the development of trainees should not be ignored as these teachers were seen as supportive and almost entirely

helpful. They provided stimulus and support for trainees and were probably viewed as colleagues as they did not have a responsibility for trainee assessment. The integration of trainees with a variety of a school's teaching staff, in addition to departmental staff, could be useful. This would enable trainees to learn more and gain support from this, non-threatening, audience of "other teachers in the school".

A comparison of the findings of this research with existing knowledge

In this section the relationship of the findings of this study with published work and with contemporary opinion from a number of educationalists is presented. The interaction of ideas draws on a number of areas:

- material presented in the Literature Review (published before 2000) of this dissertation, preceding the practical work of this study
- material published in 2000 - 2002, emerging after the practical work of this study
- responses received from PGCE Science and MFL Course Leaders in HEIs as a result of the letter sent to them in May 2001 (appendix 12)
- discussion with colleagues whilst presenting this research at staff development days, conferences, research festivals and group discussion with PGCE trainees.

In order to target those aspects of contemporary literature related specifically to this study information will be discussed with respect to the four research themes and their associated research questions.

A summary of relevant and recent mentoring research and its comparison with the findings of this study

Ireson (1998) provides feedback from three cohorts of PGCE Science trainees and this suggests that his findings are based on a large, longitudinal study, sample. However, no details of the features of the populations or of the methods used to collect the feedback are included. Patel and Wimslow (1998) report on the collaborative work of one mentor and one PGCE trainee with respect to maintaining a professional, reflective diary. Although the case described is of interest the transferability of this single mentor / mentee account to entire PGCE trainee cohorts is questionable.

Jones (2000) undertook research with 25 PGCE MFL students at Edge Hill College, Lancashire into trainees' perceptions of effective mentoring. The trainees completed questionnaires, which had open and closed sections. In addition, responses to the questionnaire were discussed by a small group of trainees who volunteered to discuss the findings. The use of both questionnaire and follow-up interviews with trainees mirrors some of the data collection approaches used in this research. However, there were differences in the style of questionnaire used by Jones (2000) and in her strategy of selecting trainees for interview. Jones's (2000) questionnaire was designed to suggest specific ideas to trainees and as such directed and perhaps limited the trainees' response. Such an approach would be likely to restrict the variety of data collected, although it would ease subsequent data handling. Thus the researcher had preset the response data and this introduces bias in the information gathered from trainees. One example typifies this approach - specific mentor qualities were requested of the trainee respondents in the questionnaire. Jones (2000) had presented a list of mentor qualities and trainees were asked to put these in rank order. Another aspect of bias in data collection comes from the group interview, this being composed of *volunteers*. The responses from one group (no size given) of volunteer trainees might not be representative of their cohort.

Orensen (2002) undertook, as yet unpublished, research into the mentoring practices of Science mentors with pairs of Science PGCE trainees compared to single trainee placements. Questionnaires and structured interviews were

undertaken with trainees, Professional and Subject Mentors. This information is a useful triangulated study and it provides the only research data concerned with the value, to trainees and mentors of single and paired teaching practice placements for PGCE trainees. Orensen's (2002) research, when developed, should be a useful comparison with some of the findings (into trainees' perceptions of the value of paired teaching practice placements) explored in this study. At present no details of Orensen's (2002) sample populations, methodology or findings are available.

Liversidge (2002), through an EdD thesis with the Open University, provides many of the most recent and relevant findings to my own work. The information has become available subsequent to my own data collection activities and was discovered as a result of the letter sent to PGCE Science and MFL Course Leaders in May 2001 (appendix 12). Liversidge (2002) looked at perceptions of effective mentoring in PGCE Science trainees. A mixed methodology approach was selected. He used questionnaires from two cohorts (about 63 trainees in total), which were of an open and closed design. Small group interviews with trainees and discussion of professional, arguably reflective, diaries took place. Data was collected early on and near to the end of the PGCE course. Questionnaires were used to collect information from 14 Science Subject Mentors to triangulate some of the data. The mixed methods approach, research instruments used and collection of early and late trainee data is similar to those used in my research. Like Jones (2000) though the questionnaire data might be biased and restricted in variety as Liversidge (2002) used a short (one side A4) and simple questionnaire where trainees had to select from lists of qualities related to mentoring and mentors. The interviews took place with small sample sizes of trainees (4 or 5) with the professional diary interviews involving between 2 to 6 trainees. 14 mentors responded to a questionnaire and, at best, this must represent only 50% of the mentor population. The structure of the research instruments and small sample sizes have implications for the suitability of conclusions to be made for the whole cohort of PGCE trainees.

A. Mentoring

The first research question I posed, “what does mentoring mean?” doesn’t appear to have been asked of trainees very often. Trainees have, more usually, been asked to describe the qualities of effective mentors and mentoring, usually from a list of suggested qualities (Jones 2000, Liversidge 2002, Hobson 2002). Hobson (2002) says that trainees see school-based mentoring as *a* if not *the* key element of the ITT experience. This research supports such a statement and extends it in that trainees see mentoring as an important aspect of *all* of their ITT course, not just the school-based aspect. However Hobson (2002) forms this conclusion himself, working on the nature of trainee responses to the questionnaire and interview methods rather than in response to a specific question, posed to trainees, on the meaning of mentoring. Verloop, Vermunt and Zanting (2001) interviewed thirty graduate teacher trainees in the Netherlands and concluded that trainees had very similar views over the nature of mentoring as did their mentors. However, this study failed to represent any rank order to mentor qualities. Mentoring literature published between 1988 - 2000 (presented in the Literature Review chapter and summarised in table 8.1) suggests that mentoring involves a variety of activities:

- being a role model
- teaching
- encouraging
- befriending
- counselling
- managing
- active intervention / promoting reflection
- monitoring / assessment
- help

This research does not dispute all earlier findings but it does, apparently for the first time, give some quantitative opinion, from the trainee perspective, to the meaning of mentoring. Differences in the understanding of mentoring between trainees and their mentors seem more likely to occur from the weighting given to specific aspects of mentoring rather than in simply the listing of the components of mentoring. Lucas (2001) from a theoretical investigation of mentoring literatures supports this argument and takes it further. He suggests that there may be no common understanding in the meaning of mentoring but it is a construct created by the interaction of mentor and mentee. In this respect such a socially constructed meaning suggests that mentors and mentees may each hold, through their individual experiences, variations on the meaning of mentoring. This research showed that trainees strongly identified with the nurturing, historic, definition of mentoring and looked principally for mentoring to provide help and support. “Help” was often mentioned by trainees as a valuable part of mentoring but did not appear in published work related to mentoring in an educational field until 2000 (Roberts 2000). Support, encouragement, counselling and constructive criticism may be useful but these are not the same as ‘help’, which is a direct request for personal assistance during teacher training.

The second research question, “what qualities do trainees look for in their mentors?” has been more frequently explored by researchers. Earlier published work (1988-2000) suggests mentors need to possess a variety of qualities, which involve:

- managing difficult and multi-faceted issues
- using high level skills
- resolving conflict between a nurturing role and one of rigorous assessment
- interpersonal relationships, on a one-to-one basis, but also at a collegial and institutional level
- ideas which are understood and interpreted differently by people and institutions

- deploying a collection of models and strategies both flexibly and sensitively
- constructing individualized training tailored to the needs of the mentee
- creating and maintaining a dynamic process that propels mentees forward whilst combining support and challenge.

The Open University (2001) gives advice on the roles of school mentors in its flexible PGCE programme. However, this opinion is informed principally by educationalists rather than by trainees. Hobson (2002), agrees with Foster (1999) over the mentoring qualities valued by trainees. They say that trainees find supportive, reassuring mentors who make time for them are helpful. In addition, Hobson (2002) and Foster (1999) say trainees find mentors who offer practical advice and ideas relating to their teaching and give constructive feedback to them as important. When Hobson (2002) asked trainees about their mentor's effectiveness at mentoring, he found that 81% of mentors might be described as quite to very effective, slightly greater than the findings of this study, although a different scoring system was used. Hobson (2002) describes trainees as seeing the Subject Mentor as top of the list for their mentoring effectiveness with Professional and college mentors lying in a similar and clearly lower position. These findings differ from those of this research, which suggests trainees, at this college, see Subject and college mentors to be of equally high value. Professional mentors are noticeably lower in perceived mentoring value. This research additionally shows that trainee peers were seen as the most valuable of mentors, as peer mentoring obtained the highest mean score for the quality of mentoring. It is important to acknowledge and develop the potential mentoring value offered to trainees from peer mentoring and also to realise that different courses in different institutions may result in differences in trainees' perceptions of the mentoring value offered by college tutors. Liversidge (2002) collected data that enabled the ranking of trainee perceptions of mentor qualities. He says trainees would rank (most popular first) his list (pre-set) of mentor qualities as:

Supportive / showed interest
Approachable
Offered advice / ideas
Able to give constructive criticism
Monitoring and sets targets
Positive approach
Sense of humour
Professional approach
Empathetic

(Liversidge 2002, table 4.3)

These compare with the ranked findings of this research (table 10.7, trainees' perceptions of what makes a good [Subject] Mentor):

Someone who makes time for you
Enthusiastic
Gives critical but constructive feedback
Supportive
Approachable
Flexible
Someone who understands students needs on a PGCE course
Well-organised
An experienced teacher
Positive attitude

A number of these mentor qualities appear in both lists and are supported by Hobson's (2002) findings. There appears to be agreement that trainees' perceive the most important qualities in a mentor as a caring person who values and nurtures the mentee. Consequently, mentors who show they care and make time for trainees, support them and offer constructive feedback that

encourages reflection are seen as possessing the most useful mentoring qualities. One other factor is important to consider with respect to a trainee's perception of the quality of mentoring. This concerns the variations in trainee experience that exist across a PGCE subject course and programme. Such matters do not generally appear in published work, as these tend to reflect small-scale and case-specific studies. However, issues of equality of trainee provision and cross-programme consistency of courses have been frequently raised in discussion at the research events I have presented in connection with this study. Clearly, variations in teaching load, types of classes taught, quality of mentoring provision, nature of the college-based course, daily home-school travel times and the availability of paired teaching placements create considerable differences that impact upon a trainee's success and well-being on an ITT course and on their perception of the quality of mentoring.

B. Mentoring Strategies

The literature review showed (Wilkin 1992, Hagger and McIntyre 1994, The OU Professional Development 1994, SMC Mentor Training Programme 2000) that the processes for mentoring trainee teachers, appearing in published work, involved a combination of teacher observation, collaborative teaching and solo teaching with co-analysis of practice. Although there was agreement from educationalists of a progression from teacher observation, through collaborative teaching to solo teaching no recommendations on the balance (time duration and weighting) of such mentoring strategies was provided. Likewise discussions on collaborative teaching, although important, are restricted to teacher – trainee collaboration and omit discussion over the value of peer collaborative teaching.

Research question three was concerned with trainees' views on the value of teacher observation, collaborative teaching and solo teaching and co-analysis of practice. Clearly trainees saw a value in some teacher observation throughout the course. There appears to be hardly any contemporary evidence, from trainees, on the value of teacher observation. Hobson (2002)

reports (from evidence presented by 5 of 16 History PGCE interviewees) that trainees found teacher observation valuable. However, the statement appears to have been made by a small number of trainees without a specific question on this point. Additionally, this is not supported by recommendations on the amount or placing of such observational activities and falls short of the body of evidence needed to justify curriculum change. There is little published data on trainees' perceptions of the value of collaborative teaching. Such collaborative teaching could be with the Subject Mentor or another experienced teacher and in many cases it could be between pairs of trainees. Jones (2000) suggests that trainees saw their mentor as a friend but not a partner. This relationship, she says, indicates there is little involvement with partnership activities such as collaborative teaching, even though collaborative teaching underpins school-based training. The absence of data on trainee perceptions of peer collaborative teaching could suggest that little teaching of this style occurs. Peer collaborative teaching would be possible when paired departmental placements of trainees occurred. Although some trainees are currently placed in school departments in pairs, at present, virtually no peer collaborative teaching occurs. New initiatives will be needed if this mentoring strategy, seen as valuable by trainees, is to be adopted.

Hobson (2002), admittedly from just 16 PGCE History interviewees near to the end of their course, said that the majority (14 of the 16 interviewees) found being observed, receiving feedback and constructive criticism on their teaching to be valuable to their teacher development. Around half of these trainees continued to add that having mentors help them by checking lesson plans before they were taught was helpful.

Liversidge (2002) looked at the main teaching related concerns of Science trainees at the start of their PGCE course. Class management and subject knowledge were the two dominant features and this agrees with the earlier findings of Booth (1993) with English, Geography and History trainees. This is supported by the much earlier findings of Fuller and Brown (1975) where classroom survival was seen to be the most important concern of trainee

teachers. Trainees would be helped by planned teacher observation that continues throughout the PGCE course, along with an increase in teacher and peer collaborative teaching. In addition a commitment from mentors to provide regular feedback and constructive criticism to trainees would be helpful. These mentoring comments and mentor commitments would improve the quality of trainees' teaching and would help to increase trainee confidence by offering support, help and regular advice thereby countering trainee concerns over class management and classroom survival. A lack of such action would be detrimental and could increase trainees' feelings of isolation in teaching. Such isolation and the associated teaching concerns could result in trainee withdrawals from the PGCE course.

There is little data available on the value of paired departmental teaching placements for trainees. Orensen (personal communication 2002) said that the value of paired teaching placements is an under-researched area. He offered, from currently unpublished sources, findings that suggested trainees generally found advantages in paired placements, although in some cases resentment had occurred.

C. Reflective Practice

Research question six, "what are trainees' actions and values with regard to reflective practice?" sought information on the attitude and behaviour of beginning teachers to reflective practice. The literature review in this thesis established the process of reflection as a professional responsibility of educationalists (Soper, 1992). A variety of models, by which formalised thinking and critical analysis (or reflection) may occur are presented. The key aspects of these involve a reflective model being used to establish the focus of reflection i.e. to identify *significant issues* for reflection. Subsequent reframing of these issues, the construction and consideration of the impact of modified actions, along with ways of implementing changes are common aspects in the reflective process. This logical and systematic approach to reviewing and refining teaching typifies reflective processes, yet requires *time*

as well as belief to achieve most success. Trainees have already been shown to have principal concerns with class management and subject knowledge issues. The trainee's understanding of reflection (the valuing, style and amount of time spent on reflection) may be different to that undertaken by experienced teachers or educational researchers who have written about teacher reflection. For trainees their newness to teaching, the need to succeed on a heavily school-based and short (36 week) PGCE course sets an agenda alongside which the place and purposes of reflection have to be aligned. In this research trainees said that they would learn most effectively with regular, constructively critical mentor discussion as well as being given some training, in college, on how to reflect. Hobson (2002) indicates that trainees are concerned with a particular purpose of reflection. He provides evidence, from trainees that indicates purposeful reflection has most value to trainees. Hobson (2002), p.12 states, "trainees valued feedback that was concrete or procedural ...rather than that involving explanation or justification i.e. an emphasis on what and how rather than why". He continues to suggest that the deeper analytical thinking, typical of published reflective processes, may not be valuable at this stage. Verloop, Vermont and Zanting (2001), using research data from teacher trainees in The Netherlands, counter this view and suggest that trainees wanted to know more than the 'rights' and 'wrongs' in their teaching. They use data from other authors and declare that trainees want to be involved in the analysis of their lessons but that they need their mentors to guide and show them how to reflect. They continue that some mentors did not seem clear on how to reflect themselves and had difficulty in encouraging reflection as opposed to directing the action of their mentees. There appear to be a number of variables involved in the determination of appropriate reflection in trainees. There may be other, greater concerns at the outset of teaching such as class management and subject knowledge. There may be a lack of time to reflect properly, the mentor may not encourage or be able to show how trainees might reflect. Personality styles (Gardner 1984) and life experiences of mature students may also influence the value trainees' place on reflection.

The findings from this study indicated that the practice and value of keeping reflective diaries varied with the subject studied and stage in the ITT course. Generally, reflective diaries were much more commonly kept by MFL than Science trainees but in both subjects some trainees stopped keeping reflective diaries as the course progressed. Patel and Wimslow (1998) suggest that trainees see a value in a reflective diary as this is a formative process that can be used to inform subsequent action. This is contrasted with the purpose of PGCE assignments, which are seen as summative. However, this evidence comes from a study of just one PGCE trainee and may not be representative of general opinion. From those who kept diaries (25% of Science cohort and 81% of MFL cohort in early teaching) in this study there appear to be benefits, which need the following issues to be addressed by course organisers:

- should the keeping of reflective diaries be compulsory? Does the phase in the PGCE course affect this practice?
- what use is made of the reflective diary to help trainees?
- how much time should trainees be spending over their reflective diaries?
- is there a case for different recommendations to meet the different needs of the trainee population?

Research question seven was, “how does the time available to trainees during the PGCE course and mentor support affect reflective practice?”. The findings related to this question showed that the majority of trainees had long working weeks, especially near to the mid-point in the course. The resultant time pressures have implications for the practice of reflection. In addition to the time spent on the PGCE course by its trainees the extent of guided reflection would be influenced by the interaction with experienced teachers, who have limited time for trainee contact.

Liversidge (2002) looked at the time spent with school staff each week. Science trainees, on average, spent 1-2 hours each week in discussion with Subject Mentors, which was the same as they spent talking to other teachers.

Discussion with the Professional Mentor was typically between 0-1 hour per week. Surprisingly the Science Technicians offered the most support at, an average of, 1-2 hours per week.

In responses to the questionnaire surveys of my research Science trainees described and ranked the most effective types of mentoring activities. These were placed in rank order (most important first):

- Observation and subsequent discussion
- Informal discussion on incidents that had just taken place
- Looking at and discussing planning
- Information on class management
- Ideas and strategies for lessons
- Discussion of resources

The first three of this ranked list are all examples of collaborative reflection and this clearly signals the trainee's perception of the value of reflection with mentors and experienced teachers. A lack of time must restrict such discussion and the extent of reflection that occurs.

The nature and purposes of reflection perceived by trainees and their need for guidance on how to reflect are important issues. There may be qualitative differences in the purposes of reflection for beginning teachers when compared with the needs of experienced teachers. The published literature on reflection may be more suitable for the experienced teacher wishing to undergo further professional development rather than for a trainee at the start of their teaching career. The requirement, use and time to be spent over maintaining a reflective diary as a PGCE course progresses needs to be addressed too. In addition some experienced teachers need to be guided on the nature and purpose of reflection in order that suitable reflective practices are used with trainees.

D. Professional Development

A profession, according to Hoyle and John (1995), is characterised by components of specialist knowledge, client centredness and autonomy. Teachers over the last few years have been required to respond to greater state control and thus the component of accountability could be added to this, 1990, list. The change in emphasis of professional values and practice from circular DfEE 4/98 to DfES 02/02 (presented later in this chapter) could signal a greater state emphasis on the nature of teacher professionalism.

There is little recently published material on trainee teachers' perceptions of appropriate professional development, an area where this study could offer a useful addition. Foster (1999) says that teacher trainees consider that university based teacher preparation should not be abandoned as it provides valuable professional development in subject knowledge and pedagogic skills. A case against wholly school based ITT is being presented here. A one year PGCE course offers just twelve weeks of university / college based time which must have an impact on the nature and depth of professional development material that can be covered. It seems reasonable to suggest that those students on three or four year undergraduate teacher training courses will have the opportunity to approach the nature of professional values and practice very differently. Not only will there be more college based time available this will also span a number of years enabling a different, arguably more reflective approach to be taken. Thus newly qualified teachers could well differ in their definition and understanding of teacher professional development dependant upon the nature of the ITT course they followed. When Hobson (2002) asked trainees about their perceptions of effective teacher preparation they suggested the key aspects were regular observation and feedback, constructive criticism of lessons with concrete or procedural information being given. Jones (2000) asked how well prepared MFL trainees felt, at the end of their PGCE course, for their first year of teaching. Although an overwhelming majority of her 25 trainees felt well prepared some of them thought that the PGCE course was too short and an 18 month training course, as in Germany, would be better. The

research data from this study came from the late course questionnaire returns (N = 66). Trainees were asked to comment on how the PGCE course had prepared them professionally to enter teaching. Like Jones (2000) many felt well prepared although there were differences between the subjects. Science trainees cited the value of college based subject knowledge, which was absent in the MFL course which focussed on valuable pedagogic skills. Many trainees also reported concerns over their ability to cope in terms of workload, confidence and support on a full teaching timetable, at the start of their induction year. Again time, its management and deployment within the PGCE course needed particular attention.

Clearly, as with reflective practice, the planning and content of professional practice during a PGCE course differs to that in published research. This most probably demonstrates the differences in perceptions of relevant professional practice between trainees and experienced professionals, the writers of published work being representative of the latter group. For trainee teachers the emphasis for appropriate professional development appears to lie with the provision of classroom management skills / pedagogic knowledge, subject knowledge, confidence, support, time and time management. These are all vital aspects for the new teacher to be able to function effectively with the profession. Dimensions of specialist subject knowledge, autonomy, client centredness and accountability represent the components of professionalism described in published literature and these constitute larger, more general aspects perhaps with more relevance to the experienced professional.

Prior to presenting an 'action plan' for the key findings of this research the influence of the new DfES circular 02/02 on the research themes of this study should be considered.

The influence of DfES Circular 02/02 on the focal areas of this study.

DfES circular 02/02, “Qualifying to teach – Professional Standards for Qualified Teacher Status and Requirements for Initial Teacher Training” was introduced on 1st September 2002 and replaces, with the same legal standing, DfEE circular 4/98.

The new emphases in circular 02/02 that have relevance to the focus of this study are shown below and then summarised for their impact on professional development, mentoring and reflective practice. The new circular describes teacher professional development as an ongoing process, promoting a state interpretation of the continual professional development throughout a teacher’s career.

Initial training is not an end in itself, but the start of a long-term process of professional development.

(DfES 02/02, 2002, p.1)

The Standards are organised in three, inter-related, sections rather than in the four sections of 4/98. The three sections are:

1. Professional Values and Practice
2. Knowledge and Understanding
3. Teaching

Section 1 replaces section D of 4/98, in which it is similar but not identical. Placing this section first rather than last may give greater emphasis on professional development. Circular 02/02 refers to the three sections of the Standards as being inter-related and some educators (National Conferences 2002, SMC, PGCE Programme meetings 2002, SMC Professional Mentors’ Training 2002) have described the first ‘professional’ section as all embracing covering the territory of all the QTS Standards. Statement (1.7) requires a greater emphasis to be placed on reflective practices than previously:

They (the trainees) are able to improve their own teaching, by evaluating it, learning from the effective practice of others and from evidence. They are motivated and able to take increasing responsibility for their own professional development.

(DfES 02/02, 2002, p.6)

The above is a development of Standard B.o in circular 4/98 which says trainees must:

Evaluate their own teaching critically and use this to improve their effectiveness

(DfEE 4/98, 1998, p.)

The new statement has lost the notion of *critical* evaluation in 4/98, which was shown earlier to be a vital component of reflective practice. However, a wider description and emphasis on the need for reflective practice is given and this is linked with the processes of taking ownership for professional development.

Section 2.1 (subject knowledge), 2.1c (Key Stage 3 National Strategy and cross-curricular issues), 2.2 (Citizenship, Personal Social and Health Education), 2.8 (skills tests in Literacy, Numeracy and ICT) indicate that more of the trainees' time needs to be devoted to these areas. This could well diminish the time available for the exploration and development of mentoring and reflective practice for trainees. In order to prevent the reduction in trainee reflective practices it will be necessary to identify such activities and embrace them in these new areas of the PGCE curriculum. Section R2.3 in the Requirements for ITT states:

Ensure that the training takes account of individual training needs

(DfES 02/02, 2002, p.15)

This statement acknowledges the different backgrounds and capabilities of trainees, seeing them, correctly, as a diverse population where individual learning programmes have value. To satisfy this requirement more discussion on a one-to-one basis, giving a greater responsibility to school and college mentors will be needed. There are implications here for the preparation of such mentors in order that they can deal effectively with such client-tailored, one-to-one, adult tuition.

Summary

At one level circular 02/02 provides no major changes in the organisation of ITT courses and in most respects the general structure and purposes of 02/02 are the same as those in 4/98.

Compared to DfEE 4/98 circular 02/02 gives greater emphasis to the professional development of a teacher. “Professional Values and Practice” has become the first section of the Standards, promoted from its, final section, location in circular 4/98. The inclusion of section 1.7 gives a new emphasis on the value and need for reflective practices in teaching. Professional development is clearly signalled as an ongoing process throughout a teacher’s career.

The increased requirement for subject knowledge development, Key Stage 3 broad curricular aspects, Citizenship, PSHE as well as skills tests in Literacy, Numeracy and ICT mean that less time will be available for the remainder of ITT. Consequently, it could be even more difficult to create the thinking time and opportunities for trainees to explore with mentors their professional development and reflective practices. If reflective practice is important it will be necessary to ensure opportunities for reflection are suitably integrated into the programme.

A requirement for addressing individual training needs signals an increase in the use and value of mentoring. School and college mentors will need to

discuss, diagnose and negotiate specific learning and training needs for each student. This has, of course, always occurred on an ad hoc, informal basis, depending upon the needs of the trainee but also on the willingness and confidence of mentors to encourage such dialogue. DfES circular 02/02 formalises this requirement and should help to reduce current cross-programme variation in mentoring provision. The consequence of these changes should bring about improvements in the consistency of mentoring provision for trainees. There are problems here though over the time needed to undertake one to one discussions and the impact it has on reducing the time for group teaching sessions whilst students are in college. It also has implications for the knowledge and skills needed by mentors to be able to provide high quality, individually tailored mentoring. Aspects of mentor training, time and structure need to be considered.

Overall DfES Circular 02/02 appears to strengthen the case for professional development, individual mentoring and the use and value of reflective practices in ITT. In some respects it can be viewed as a more integrated approach to ITT, providing a more professional perspective to teachers. It may also be seen as a second edition to 4/98 by presenting a 'leaner and fitter' ITT National Curriculum. There are fewer pages and fewer QTS statement in circular 02/02 than the corresponding 4/98 and this text reduction mirrors the changes that were made to the National Curriculum for schools. However, it adds more content to be covered in an ITT course than appeared in circular 4/98. This creates a dilemma as to how the time and opportunities for the development of "Professional Values and Practice", especially for the individualised training programmes that are now required, can be created. PGCE courses are already very intensive courses both physically and mentally for trainees. A potential problem here is one of content-overload. There could be a fear of too many things to do, in order to satisfy the Standards, and not enough time to really engage and learn from some of them. This would be frustrating and demoralising for students. Such frustrations are already evident in some trainees following the requirements of 4/98. There just isn't the time

in a 36 week course, with only 12 weeks in college, to pursue aspects in depth. Perhaps this is a consequence of a competence, school-based model of ITT. Success is achieved by general competence, at least bare passes, across a wide-ranging selection of standards. The consequence of this is that at the end of a PGCE course wide-ranging *competence*, as opposed to expertise, is generally displayed. In the spirit of life-long teacher professional development, time for thought, reflective practice and the development of teacher expertise occurs throughout in-service teaching. This ideal has much to support it but continual and appropriate professional development will require a lot of self-motivation from qualified teachers. What will teachers have to gain to stimulate their engagement and time over such professional development? Will support and opportunities to use newly acquired mentoring skills be available?

Action Plan to address key recommendations

The key findings from this study have been arranged into an action plan in table 11.1 (over-page) to suggest how each finding can generate a target for implementation into the PGCE course. Indication of evidence of the successful integration and of the key personnel responsible for action is given. This action plan is typical of those used in the college to initiate curriculum development in response to recommendations from either internal or external inspecting agencies.

Table 11.1 An Action Plan for the implementation of the key recommendations of this study

Area for Action	Target	Success criteria	People Responsible
A. MENTORING The meaning of mentoring [Qu.(i)]	Mentors should realise that generally trainees' value of the nurturing aspects of mentoring most highly. Help and support were the most important aspects of mentoring to trainees.	Comments made by trainees in their Christmas and End of Course Evaluations concerning the purpose and quality of mentoring trainees experienced. Comments made by trainees about the purposes of mentoring in tutorial discussions held by college tutors	Subject Mentor. Professional Mentor and Subject Leader in Mentor Training sessions.
The allocation of time and the location for mentoring discussion. [Qu.(v)]	Trainee allocated a set time for discussion each week. A quiet, comfortable, relaxed room and the full attention of the mentor assured.	Comments made by trainees in their Christmas and End of Course Evaluations concerning the quality of mentoring. Comments made by trainees in tutorial discussions held by college tutors	Subject Mentor Professional Mentor Subject Leader Programme Leader
The mentoring style. [Qu.(ii)]	Constructive criticism is given on a regular basis throughout the course	Comments made by trainees in their Christmas and End of Course Evaluations concerning the quality of mentoring. Comments made by trainees in tutorial discussions held by college mentors	Subject Leader Programme Leader
The value of pair Teaching Practice Placements [Qu.(iv)]	Trainee pair teaching placements to be introduced and / or extended in all school departments	Comments made by trainees in their Christmas and End of Course Evaluations concerning the value of pair trainee teaching placements. Mentor comments about trainees. Reduced course withdrawal.	Subject Mentor Professional Mentor Subject Leader Programme Leader
The selection of appropriate mentor qualities in mentors. [Qu.(ii)]	Concentration on school departments offering high quality mentoring for trainees. Mentor Training Course emphasis.	A reduced level of criticism in evaluations and/or in tutorial discussion by trainees on the quality of school mentoring. Fewer cases of remedial action needed by the Subject Leader.	Subject Mentor Professional Mentor Subject Leader Programme Leader

Area for Action	Target	Success criteria	People responsible
B. MENTORING STRATEGIES Trainees' opinions on the value and use of: (a) lesson observation [Qu.(iii)]	There should be opportunities for lesson observation throughout the PGCE course. There should be 20-30 hours of lesson observation in the first half of the first teaching practice and then one lesson of observation per week for the remainder of both teaching practices.	Greater consistency in PGCE trainee provision as shown in the Christmas and End of Course trainee evaluations. Comments reported by trainees in tutorial discussion held with college tutors. Trainee school placement timetables show the location of observational <i>and</i> corresponding feedback sessions.	Subject Mentor Professional Mentor Mentor Training Co-ordinator
(b) collaborative teaching [Qu.(iii)]	There should be 5-10 hours of collaborative teaching in the first half of the first teaching placement. There should be an increase in the use of peer collaborative teaching.	Greater consistency in PGCE trainee provision as shown in the Christmas and End of Course trainee evaluations. Comments reported by trainees in tutorial discussion held with college tutors. Trainee school placement timetables show the location of collaborative teaching <i>and</i> corresponding feedback sessions. The demonstration of 'fun' by trainees is commented on more by mentors. Course withdrawal rate is reduced.	Subject Mentor Professional Mentor Mentor Training Co-ordinator
(c) solo teaching and co-analysis of practice [Qu.(iii)]	There should be 10-14 hours per week of solo teaching from early January until the end of the second teaching placement i.e. for the entirety of wholly school-based teaching placements. This means that trainees have 50-60% of a standard scale teacher's teaching load in their teaching placement timetable at this time.	Greater consistency in PGCE trainee provision as shown in the End of Course trainee evaluations. Comments reported by trainees in tutorial discussion held with college tutors. Trainee school placement timetables show the location of solo teaching <i>and</i> opportunities for feedback sessions.	Subject Mentor Professional Mentor Mentor Training Co-ordinator

Area for Action	Target	Success criteria	People Responsible
<p>C. REFLECTIVE PRACTICE</p> <p>Trainees' actions and values with regard to reflective practices.</p> <p>[Qu.(vi)]</p> <p>Mentor Qualities</p> <p>[Qu.(ii)]</p>	<p>Mentors ask to see and examine the trainee's Teaching file for evidence of long-term, formal lesson planning and evaluations of lessons.</p> <p>Mentors encourage trainees to write lesson evaluations and they discuss these with trainees.</p> <p>Mentors openly acknowledge that reflection, by whatever the appropriate means, is a professionally valuable action that needs to be adopted by trainees.</p>	<p>The Tracking Document records that these documents have been seen, read and discussed.</p> <p>Formal lesson crits make comment on the organisation and appropriateness of lesson planning and lesson evaluation documents.</p> <p>Trainees demonstrate the ability to use and include reflective practices in their discussion.</p>	<p>Subject Leader</p> <p>Professional Mentor</p> <p>Subject Mentor</p> <p>College Tutor</p> <p>Trainee</p>
<p>Perceptions of mentoring from the teaching practice review meeting, the Tri-Partite Review.</p> <p>[Qu.(v)]</p>	<p>The trainee is encouraged to think and talk more about their teaching in meetings.</p> <p>The trainee should, supported by mentors, take the lead in Tri-Partite Review meetings.</p> <p>Course Documentation should be edited to remove repetition, improve clarity and reduce the amount of paperwork</p>	<p>Trainees talk more in meetings.</p> <p>Mentors are willing to listen to and respond to trainees' proposals.</p> <p>An edited and reduced amount of paperwork is produced. Fewer criticisms of the paperwork are made in trainee evaluations.</p> <p>A single discussion document is produced for the Tri-Partite Review</p>	<p>Subject Mentor</p> <p>College Tutor</p> <p>Trainee</p> <p>Programme Leader</p> <p>Subject Leader</p>
<p>The time spent reflecting on and writing lesson evaluations.</p> <p>[Qu.(viii)]</p>	<p>Trainees are given guidance on writing lesson evaluations.</p> <p>Mentors suggest how the style of reflection may change – with respect to teaching experience and the greater time pressures on lesson preparation and marking as the amount of solo teaching increases.</p> <p>Mentors use and encourage trainees to use critical thinking and reflective analysis in the evaluation of their teaching.</p>	<p>Trainees spend 25-35 minutes over lesson evaluations at the start of the course reducing to 12-15 minutes by the end of the course.</p> <p>Trainee evaluations show evidence of critical thinking, analysis and reflection as opposed to principally descriptive evidence</p>	<p>Professional Mentor</p> <p>Subject Mentor</p> <p>Course Tutor</p> <p>Trainee</p>

Area for Action	Target	Success criteria	People Responsible
<p>Trainees' habits on keeping reflective diaries.</p> <p>[Qus.(vi) and (viii)]</p>	<p>Mentors encourage / make it compulsory for trainees to keep written reflective diaries in the first half of the first teaching practice. Subject Mentors and college tutors remind trainees of this requirement. When solo teaching dominates, from January onwards, keeping a reflective diary becomes optional.</p>	<p>Until the Christmas break trainees bring their reflective diaries to weekly college tutorials and they are encouraged to read / use extracts from their diaries in discussion. Subject Mentors discuss aspects from the reflective diary with trainees.</p>	<p>Subject Leader</p> <p>Subject Mentor</p> <p>College Tutor</p> <p>Trainee</p>
<p>D. PROFESSIONAL DEVELOPMENT</p> <p>Trainees' perceptions of their professional development needs</p> <p>Trainees' time-management of their PGCE work</p> <p>[Qu.(ix)]</p>	<p>Trainees see that reflection, by a variety of means / models, is an important part of professional practice</p> <p>Trainees organise their weekly duties on the PGCE course into 40 hours, travel time being in addition to this.</p> <p>Celebration of success at the end of the course is important. It is also important to acknowledge that continued development, support and help will be offered when the teaching career begins.</p>	<p>There are more comments on trainee well-being in the end-of-course evaluation.</p> <p>Trainees' evaluations and Career Entry Profile discussions with college tutors show increased feelings of support and help for their subsequent career.</p> <p>Fewer complaints of teaching fatigue from trainees, informally to mentors, in tutorial discussion and in end-of-course evaluations.</p> <p>Reduced course withdrawal rate.</p> <p>Trainees modify teaching and lesson preparatory styles as their solo teaching builds.</p> <p>There are fewer concerns by trainees, on the end-of-course evaluation, over their ability to cope on a full timetable.</p> <p>Trainees are more able to see and discuss the possibilities for their future career development.</p>	<p>Programme Leader</p> <p>Professional Mentor</p> <p>Subject Leader</p> <p>Subject Mentor</p> <p>College Tutor</p>

Strengths and weaknesses of this study

Strengths

The strengths of this thesis are dealt with in three categories, these being general structural aspects, specific strengths of each chapter and the benefits gained in my own professional practice.

Structural aspects of the thesis.

Whilst writing this thesis I have tried to incorporate those research qualities mentioned by David Scott, as The Open University's Doctor of Education Course Chair, at the Residential Weekend in January 2002. The thesis has been written to show *transparency*. It is clear from a conceptual and methodological sense what has been done why it has been done and how it has been done. The thesis demonstrates *critical reflection*. A critique of relevant conceptual and methodological work is included. There is discussion over the strengths and weaknesses of the methodological work undertaken as well as that not used i.e. a justification for the selection of methods is provided. The study exhibits *reflexivity* as the influence of my own role and involvement in the research is considered. The context for the empirical study is included in the introduction along with a description of how my full-time professional duties are related to this. The thesis has *integrity* in that a justification for the narrow boundaries and nature of the research is provided. This enables reliable, often triangulated, data using a mixed methods approach to be gathered. The thesis demonstrates *coherence*. Even though the chapters were researched and written over a period of several years care has been taken in editing to 'top and tail' and cross-reference the chapters to provide a logically structured and coherent document. The overall *structure* of the thesis followed an empirical research design (abstract, introduction, literature review, method, results and their analyses, discussion) that is often used in published Social Science research.

As the research provided some new knowledge and understanding on perceptions of mentoring for PGCE trainees it demonstrates *originality*. The study provides a basis for evidence-based recommendations for change that should enhance the quality of mentoring at the college and (via dissemination) at other Teacher Training Institutions. The text is *accurate* as it has been checked for spelling, grammar and typological errors via a thorough editing process involving myself, OU tutor and a variety of colleagues. *Referencing* of published work has been checked and aligns with the recommendations for the OU, EdD dissertation. The organisation and contents of the *appendices* are as requested in the course materials. Finally, the study is *relevant* to my own practice and to that of others involved in mentoring research and Initial Teacher Training. The study has value in that it provides some new and up-to-date information from the client (teacher trainee) perspective. The evidence gathered is used to suggest changes in the mentoring of trainees that should enhance the quality of trainee learning on PGCE (sec) courses.

The thesis was constructed with regard to the marking criteria of the EdD thesis and should satisfy those requirements, namely that the work:

1. Demonstrates reflection on the relationship between theory and practice in education
2. Makes a significant contribution to the theory and practice of education
3. Shows an ability to select and apply appropriate research methods
4. Exhibits a high level of critical analysis

And it fits the global judgement criteria for the OU EdD:

The thesis must be of good presentation and style and show evidence of being a significant contribution to knowledge and of the candidate's capacity to pursue further research without supervision. The thesis

must contain a significant amount of material worthy of publication.

(EdD (stage 2) examination procedures (2002), pp. 7-8)

Specific strengths

These are presented alongside the relevant chapter of the dissertation. In the *Introduction* a clear contextual framework is provided to show the nature and location of the investigation and the influence of my role upon this.

The *Literature Review* shows that trainees' perceptions of mentoring is an under-researched area. A substantial and appropriate literature review is undertaken to help inform the key themes and questions for investigation in the study. A rationale for the use of both quantitative and qualitative methods in the study is provided following consideration of both approaches in published work. A justification for both broad, statistical (quantitative) data and richer, deeper (qualitative) data is made; showing that such an approach is suitable for the empirical work. Published literature was used to inform the research area and practice and this helped in the selection of a narrow focus for investigation. Key research themes, subdivided by specific research questions, gave a suitable structure for investigation in the study.

The *Method* chapter shows that all the investigatory work was thoroughly trialled and discussed with those involved as well as other relevant individuals. The methods used in the full study had been revised and trialled several times. The research instruments were modified to fit trainees' needs i.e. responses in the questionnaire survey influenced some of the questions in the interviews. Appropriate professional and ethical practice was followed for the organisation, collection, recording and subsequent reporting of the findings.

Data was gathered from two different subject areas and this provided a rare opportunity for cross-subject comparisons. A substantial amount of data was collected and this was strengthened by using a variety of data collection techniques (questionnaire, interview, observation, group discussion etc). Additionally, data was collected twice from the same cohort, to investigate early teaching perceptions of mentoring and to see how these might have changed, in trainees' minds, by the end of their course. Triangulation of data

was used in many parts of this investigation. This was achieved by either using a variety of methods to investigate a question (questionnaire, interview or observation) or by looking at different people's (trainees, Subject Mentors, college tutors) perspectives a specific aspect of mentoring. A novel, 2 + 2, paired interview strategy was used to generate transcript data on site (interviewer and scribe) with trainee pairs who could help each other to develop and extend their responses.

The Results and their analyses chapter shows that data were carefully and meticulously collated and summarised. Specific summary data is appropriately selected and clearly displayed. The results are rigorously and systematically used to help formulate responses to the study's research questions. Up-to-date (post DfEE 4/98) information is provided and this augments the small amount of recently published research data that exists. In some cases e.g. pair teaching placements for trainees, the distribution and quantification of the teaching duties of trainees and trainee perceptions of mentoring strategies new information is provided by this study. The findings are relevant to the current (DfES 02/02) organisation of PGCE courses. Dissemination of this research has occurred, with a variety of personnel at a number of venues, since Stage 1 (April 2000). The feedback received has been used to inform future thinking and restructure some of the investigatory focus and style of the thesis.

In the *Discussion* chapter the findings identify clear action (table 11.1) that should enhance the quality of trainee mentoring and learning on the college's secondary PGCE course. Similarities (due to DfEE 4/98 and DfES 02/02) in PGCE structure make the findings of this research applicable to other Teacher Training Providers and signal changes that should improve the quality of trainee mentoring and learning in other institutions. Opportunities for discussion of this research have already been created and are likely to continue. Through conference presentations, e-mail contact, telephone conversations and letters, colleagues in other HEIs, who are interested in this topic, have been contacted. There are already indications that some inter-HEI, collaborative work, stimulated by this research, will occur. Published research in the related

field, from a post DfEE 4/98 perspective is contextualised and analysed in the discussion. The comparison of the work of others with this study is discussed and the addition to knowledge and understanding to be gained from this research is established.

Benefits to my own professional practice

The EdD course, especially the compilation of this thesis, has helped me in my professional development. The materials I have read, the EdD programme of study and the dissertation component have deepened my knowledge and understanding of mentoring in ITT. I feel that I have achieved the goal set of knowing more about mentoring from the trainee perspective. I feel that this insight has given me greater empathy into the trainee's perspective of mentoring in an ITT course.

Specifically, with respect to the study's focal themes I have acquired a wider appreciation of the probable origins and interpretations of *mentoring* in ITT. I believe that I am better able to understand the rationale for effective mentoring and to be able to appreciate the perceptions and constraints on mentoring from a mentor and mentee stance. This greater knowledge and understanding of mentoring helps me in me in my own, professional, work as well as contributing to improvements in mentoring in ITT on a wider scale. Mentoring strategies for trainees following ITT programmes have typically been based upon ideas of mentors' and educational researchers' ideas. Although educational theory advocates a greater importance in the use of collaborative teaching than has been provided for trainees following this ITT programme no specific time recommendations are given for this mentoring strategy. This research acknowledges trainees' experiences and opinions on collaborative teaching as well as other mentoring strategies appropriate to trainees at different stages in the PGCE course. This trainee quantification, distribution and perceived value of mentoring strategies has not to my knowledge been established before and allows me to confidently propose recommendations for programme modification. In a similar manner the evidence and

recommendations on the increased use of trainee pair teaching placements in school departments demonstrates advantages in trainee mentoring strategies and in course management and trainee retention on PGCE courses.

With respect to *Reflective Practice* and *Professional Development* a key strength of this work lies in demonstrating a trainee teacher's interpretation of these notions. Published literature is typically concerned with reflective practice and professional development appropriate for experienced teachers. Such writings consider how the experienced teacher may continue to develop professionally. In this context the ideas for reflective practice and professional development are more suitable for someone with, perhaps, several years of teaching experience. In addition the time scale over which change in professional practice occurs is not time restricted, indeed as Berliner (1989) says teaching expertise may take several years to be achieved. A trainee teacher on a PGCE course completes their initial training in 36 weeks, in which appropriate reflective practice and professional development has to occur. A strength of this research lies in the evaluation of the nature and purposes of reflective practice and professional development for trainees following 36 week PGCE courses. In this early teaching and short time frame context success in reflective practice and professional development is measured in the achievement of professional competence, not expertise, against preset teaching standards (DfES 02/02). An important aspect of this study is the portrayal of trainees' perceptions of appropriate reflective practices and professional development for a PGCE course with those ideas expressed in published work, which are typically geared to a different audience, the experienced teacher.

The processes required to prepare this thesis, the interaction with EdD course tutors and colleagues, along with the dissemination activities already presented, have improved my ability and confidence to undertake and report high quality educational research. The EdD course has thus developed my abilities as an academic educational researcher.

Weaknesses

The weaknesses of the study are discussed with respect to the relevant chapters in the thesis. In the *Introduction* there was little relevant and recent (post DfEE 4/98) published work to inform the study. Most of the material was from a pre 4/98 era and was concerned with small-scale schemes that had been heavily supported such as the Oxford Internship Scheme (which preceded DFE circular 9/92). The problem of datedness of the literature probably stems from, firstly, the time elapsing over which research is done and published and the short timescale over which changes in ITT courses had to occur (DFE 9/92, DfEE 4/98, DfES 02/02). Secondly, there was greater interest, time and financial support directed into mentoring research in the immediate pre-DFE 9/92 era as this research helped to support the introduction of the more school-based ITT schemes of this circular.

During the latter period of this research (2001-2002) narrow focus published and unpublished research, giving contemporary views on trainees' perceptions of mentoring has been available and used in the discussion chapter. Such material was not available at the time this study was planned and its data collected. Contemporary relevant mentoring research was occurring alongside the research of this study. Access to such work would have influenced the focus of this study and would probably have improved the nature of the methodology and research instruments.

In the *Method* chapter data was only gathered from one institution and consequently the findings may be institutionally specific. The findings may not be typical of 1 Year PGCE (sec) programmes across England and Wales and this imposes limitations to any empirical generalisations drawn from the theoretical inferences of this study. Only two subject areas (Science and Modern Foreign Languages) were investigated. The findings of this study may not be transferable to other subjects as trainees from different subjects may hold different perceptions of mentoring. Whilst Science and MFL each represent large trainee populations (about 50 trainees per year) some subjects

e.g. ICT may have fewer than ten students. Such five-fold differences in student cohort numbers may have influence on the organisation and management of a subject's PGCE course. Large courses involve many mentors, a large number of partnership schools and consequently encounter substantial communication issues. Conversely, small courses are managed on a much more personal level with one college tutor overseeing the entire course for one, small group of trainees. Such differences in size and management style may influence trainee perceptions of mentoring and give limitations to the transferability of the findings of this research, from large student cohorts to small ones.

My own, dual role, as a college tutor and educational researcher may have influenced some of the data collected. On one hand I had responsibility for the tuition and assessment of PGCE trainees and on the other I was aiming to collect data, from trainees, on their perception and valuing of aspects of mentoring. Although I took steps to clarify the nature and purpose of data collection for this research it is possible that some trainees may have been influenced by my full-time college duties and have thus provided biased data. Keeping the material up-to-date and clarifying a specific focus for this empirical research project was complicated by a couple of issues. Firstly, by the requirements of a part-time (OU, EdD) dissertation that spread the workload over a number of years. Approximately one year's full-time research was spread over a three year, part-time, period. This limited the ability to respond quickly to change e.g. to refine quickly the research focus and methodology in the light of contemporary research. Secondly, by the interplay of my own, as well as two OU tutors' perspectives on the research topic. This was further complicated by changes to the college's PGCE programme. People with different backgrounds and experiences see issues in different ways. This had much value in helping determine and justify the research focus but it did result in an increase in the breadth of the research area generating a great deal of data and associated time to summarise and analyse it. As a result of such influences a lot more data was collected than was used in this thesis.

The advantages and disadvantages of a mixed methodological approach also needs to be given more thought. For example, it could be that this type of research is best investigated by a mixed methods approach, at least initially. There may be certain advantages in establishing specific quantitative parameters such as the age range of trainees and the number of hours solo teaching they do each week. However, for subsequent research that aims to explore trainee evaluations of mentoring the use of just a qualitative style of inquiry could be better.

Due to the large quantity of data collected for the *Results and their analyses* chapter, much of which was triangulated, there was a tension between representing an appropriate amount of multi-source data with the need to provide clear, evidence-based, conclusions to the research questions. There were difficulties in drawing together the findings from over 80 (83) questionnaire respondents in relation to open questions. As questionnaire responses were individually written by trainees they varied in style and content. It was important that I appropriately summarised their perceptions of mentoring by careful interpretation and collation of comments. Although individual detail could not be included it was important to ensure that the global findings did appropriately reflect the evidence presented by the trainees in their questionnaire responses.

In the *Discussion* chapter there are weaknesses in promoting this research throughout the PGCE programme as only a selection of college tutors and school mentors attend research events. The majority of mentors will not have the opportunity or take the occasion to listen and discuss this research. The key findings and action plan may be heard at PGCE planning meetings but the opportunity to get beyond the superficial and try to understand and think from a trainee's perspective will only be engaged with by a few. In most cases it seems that time pressures, rather than professional reasons, are the cause of such actions.

Establishing and maintaining inter HEI collaborative research is potentially very useful. However, creating the opportunity for such collaborative research

is difficult on anything but a casual and voluntary basis. The notion that inter-institutional research is valuable, needs support and can be used to inform and improve subsequent practice is often supported but rarely sponsored.

This research provides information on trainee perceptions of mentoring and on the basis of evidence recommends changes in programme provision. However perceptions of mentors are not investigated and these experienced professionals may hold different views about mentoring in some areas. They may feel that trainees' are not always aware of what is best for them. What may be needed is a fuller amalgamation of ideas on mentoring from both mentor and mentee perspectives. This process would provide information that could be used to better inform mentoring provision on the college's PGCE (secondary) programme.

Opportunities for the dissemination of this research

BERA (1992) and AERA (1992) consider it to be an obligation for educational researchers to publish their findings. I have found the dissemination of this research not only useful in informing others of the work but through interactions with colleagues new insight and interpretations of the research have been gained. The process of preparing materials for presentations has also helped me come to terms with the meaning and value of the research. The process of communicating and discussing my work with others has helped me to gain a better understanding of it and to revise my thinking in some areas. The discussion, of the findings and proposed changes in mentoring practice, with some PGCE Science trainees from the following 2001-2002 cohort was very valuable. This opportunity allowed me to receive opinion directly from teacher trainees, the target population of this research, and check out and modify my thoughts and proposals about the research. Table 11.2, on the next page, summarises the major dissemination events that have occurred or that are expected to occur in the near future.

Table 11.2. The major dissemination events of this research

Event	Date	Content	Benefits
Science (sec) tutors' meeting	July 2000	Presentation of Stage 1 EdD report and discussion of proposals for Stage 2.	Informed colleagues of the research I was undertaking. Suggested and discussed my future work. Future research was supported and seen to be useful to the tutor team and PGCE Science course.
Modern Foreign Languages Departmental Meeting	July 2000	As above	As above
Circulation of EdD Stage 1 report for comment	July 2000	The Stage 1 report was circulated to influential / interested colleagues along with a letter of explanation.	Informed key personnel of the research I was undertaking. Feedback was received on the Stage 1 report. Ideas were given for the focus of the subsequent work. Support and encouragement was offered for Stage 2
PGCE (sec) tutors' Staff Development Day	May 2001	Presentation and discussion of action research on the end of teaching practice review, the Tri-Partite Review.	Informed colleagues of the research I was undertaking. Gained support for the research and future work. Demonstrated that research could be used to direct useful, evidence-based, programme changes. Demonstrated an example of beneficial cross-subject working. Gained support from colleagues for this research.
Letter to Science and MFL Course Leaders in other Teacher Training Providers in England	July 2001 (101 letters sent)	Nature of the research. Request for published / unpublished related work. Comments and personal details for contact on reply slip.	Spread awareness of this research to a National Audience. Gained an up-to-date perspective of research (published and unpublished) in this field. Made contact with colleagues in other institutions who were interested or working in this field. This content created the potential for subsequent inter-institutional collaborative research and publication.

Event	Date	Content	Benefits
Cross-Faculty Seminar (computer-linked and video-conferenced to the college's three sites)	December 2001	The nature of the research. Presentation and discussion of the findings from the questionnaire survey. Implications of the findings for PGCE programme changes.	Created an opportunity for college-wide acknowledgement of the research. My own ideas were sharpened and focused by the thinking and questioning from research-active and interested colleagues from diverse fields. Help in formulating key findings and suggestions for programme change were given.
Annual Conference of the Association for Science Education	January 2002 (Liverpool University)	Presentation of the research. Discussion of initial findings from questionnaire surveys. Evidence-based proposals for programme changes.	Met a variety of colleagues from other HEI PGCE (sec) Science courses. Informed colleagues of the research I was undertaking. Made potential contacts for future inter-institutional collaborative research. Gained new information on mentoring e.g. Liversidge (2002), Orensen (2002). My ideas and focus for the study were sharpened.
Open University Residential Weekend	January 2002	Presentation of outline of research. Discussion with OU personal tutor indicating the direction of future work.	Met my second EdD, OU tutor for the first time and discussed the research with her. This helped contextualise issues and set future targets. Met other OU students to share ideas and feelings and empathise with them about the EdD course. Gained and discussed information on the nature of the final dissertation and its assessment. Spent time reading several past dissertations and made notes on dissertation structure to help in compiling my own EdD submission.

Event	Date	Content	Benefits
Professional Mentors' Training Day	June 2002	Presented a summary of the research and key findings. Gave recommendations for effective mentoring and discussed these.	Informed senior teachers from partnership schools about the research. A multi-subject, whole-school perspective was represented. Professional Mentors very well received the findings and proposed changes in mentoring practice. Very positive evaluations of the presentation and research were received; the work was seen as relevant and useful to the PGCE (sec) programme.
Research Festival (SMC)	June 2002	Presented a summary of the research and key findings. Gave recommendations for effective mentoring and discussed these.	Informed research-active personnel of this work. Critique of the research was received from educational researchers, which helped me reconsider aspects of the EdD thesis. Support for the mixed methodology and novel interview approach was received. Contacts were made with respect to future, related research.
PGCE Science Trainees Tutorial group (N = 12)	June 2002	As above	Informed trainees who had almost completed their PGCE course (one cohort later than the research group). Findings were contextualised from the trainee perspective. Trainees' saw the recommendations of the research as appropriate and that their implementation would improve existing mentoring provision in the PGCE (sec) programme. Trainees suggested some additional / alternative constructs to mine on some of the findings.

Event	Date	Content	Benefits
Science (sec) Subject Board Meeting	November – December 2002	Up-date and presentation of research. Discussion of key findings. Consideration of recommendations and mechanisms to achieve these.	To up-date colleagues of the research and thank them for their co-operation and contribution. Provides evidence of educational theory and research findings being used to inform and suggest improvements to educational practice. Demonstrates an example of beneficial inter-subject research along with the potential for future inter-institutional research.
Modern Foreign Languages (sec) Subject Board Meeting	November – December 2002	As above	As above
PGCE (sec) tutors' Staff Development Day	November – December 2002	As above	As above
Research News (SMC)	December 2002	Summary of the research and key findings published in the college's educational research magazine.	Updates and sustains information on the research. Motivates colleagues in similar situations. Educational theory and research findings are seen to inform and suggest improvements to educational practice.
Circulation of completed dissertation	December 2002	Copies of the EdD dissertation circulated to key personnel.	Informs key colleagues of the detail of the research. Provides influential staff who are involved with the PGCE (sec) programme with recommendations for action. Invites comment from and dialogue with key personnel.

Event	Date	Content	Benefits
Annual Conference of the Association for Science Education	January 2003	Inform and update on the research and the findings. Likely modifications to the PGCE (sec) programme in the light of this work.	Shows that the research has developed and that it generated conclusions to key questions that enabled recommendations for improvements in mentoring practice to be made. Discussion of the research with colleagues from other Teacher Training Providers. Receive an up-date on mentoring research in other institutions. Establish / develop the prospect of inter-institutional collaborative research in this field.
Science Teacher Education Journal (Association for Science Education)	January - February 2003	Production of an article associated with the EdD research for publication.	This would be a new venture (writing for journals) for me. Aspects of this thesis will be edited for a style and length appropriate to the journal requirements. Makes use and makes public the research. It promotes knowledge and understanding and indicates beneficial changes in mentoring of trainees for PGCE (sec) programmes. May initiate contacts with colleagues in other institutions who can provide a critique of the work and offer the possibility of future collaborative research.
Collaborative research with other HEIs	April 2003 -	Sharing of similar research. The production and publication of collaborative findings. (Tentative discussion to this effect has already been undertaken with another HEI).	Gives a broader perspective. Challenges the value of empirical generalisations from institutionally-specific theoretical inferences. Promotes the notion of educational theory and research informing and improving educational practice. Offers me professional development and new opportunities.

Event	Date	Content	Benefits
Mentoring and Tutoring Journal	June – July 2003	Production of an article associated with the EdD research for publication.	New venture of writing for academic journals. Makes use and makes public the research, promoting beneficial change for PGCE (sec) courses. May initiate contacts with colleagues in other institutions who critique the work and offer opportunities for future collaborative research.
British Education Research Association (BERA) [Annual Conference]	September 2003	Summary of the research and key findings.	Gives a broader perspective. Challenges the value of empirical generalisations from institutionally-specific theoretical inferences. Promotes the notion of educational theory and research informing and improving educational practice. Offers me professional development and new opportunities.

Aspects for future research

There are a number of aspects that seem appropriate to study in order to increase the knowledge and understanding related to this research. Further work may either *develop* the existing research, by providing a broader base of information on mentoring from the within the institution, or it may *extend* the existing research by providing emphasis on different methodology, a cross-institutional or cross-professional perspective.

Those aspects of future research that *develop* the current work would include:

1. *A deeper exploration of trainees' perceptions of mentoring.*

In the light of the current findings it should be possible to identify specific aspects of mentoring, mentoring strategies, reflective practice or professional development that are worthy of further investigation. This may mean that existing data, some of which has been unused, undergoes analysis. It may mean that additional data on trainees' perceptions of mentoring need to be collected. There may be a need to modify the balance of the research instruments e.g. more interviews with a more open style, further observational studies of trainees, trainee group discussion may yield additional relevant data.

2. *An evaluation of trainee perceptions of mentoring from other PGCE (sec) subject areas. Are there similarities or differences with the perceptions held by Science and MFL PGCE trainees?*

The current research gathered information from up to one third of the 1 Year PGCE (sec) cohort in 2000-2001 i.e. 100 trainees in Science and MFL. However, trainees from the other PGCE (sec) subjects represent two-thirds of the cohort and their evaluations of mentoring would be a useful addition to the existing data.

3. The use of recent research findings (2000 onwards) and their methodology to re-orientate the focal areas and investigative instruments of this research.

The part-time nature of the Open University, EdD, course means that the dissertation has been spread over a number of years. Consequently, the research focus, methodology and data collection have sometimes been unable to respond quickly enough to recent findings from similar research. For example, the findings from contemporary related, research undertaken between 2000 and 2002 was not available until 2001-2 when it was published or communicated to me. Such work would have caused me to modify the focus and methodology of this research. For example, changes to some of the questions on the nature and purposes of mentoring would have occurred in the light of Liversidge's (2002) research. I would also have put more emphasis on the exploration of trainees' perceptions of single and pair teaching placements in the light of Orensen's (2002) research. However, by the time such new information was available the focus and data for this study had already been determined. Engagement in related contemporary research had therefore to be limited to the discussion chapter. The use of this information in the re-orientation of the focus and methodology of trainee perceptions of mentoring would be beneficial.

4. An evaluation of mentors' perceptions of mentoring.

The study gave, with the exception of the Tri-Partite Review research, data from PGCE trainees. Triangulating, from the different players, data on the evaluation of mentoring would be a useful addition. The Tri-Partite Review research did do this and was able to show that, in some situations, the perceptions of trainees, Subject Mentors and college tutors to specific aspects of mentoring were different. When planning for the best mentoring provision

in an ITT programme it is important to know and integrate mentoring practices that are perceived as valuable from mentors and mentees.

Those aspects of future research that *extend* the current study would be:

5. An investigation of other aspects of mentoring.

The study established a narrow focus for investigation and other aspects of mentoring could be researched to broaden the knowledge and understanding of this field. For example the study did not specifically explore components of mentoring such as counselling, monitoring, assessment, career guidance and job applications.

6. The influence of trainee cohort size on trainees' evaluations of mentoring.

It would be useful to repeat this work in other PGCE (sec) specialist subject areas that operate on a different scale to Science and MFL. For example the college's ICT department has fewer than ten PGCE trainees each year with just one college tutor. It would be interesting to discover if such a five-fold reduction in mentoring personnel (and partnership schools) has an influence on trainees' perceptions of the quality of mentoring, as proposed in the study. If differences in trainee cohort size appears to influence perceptions of mentoring such comparisons might make it possible to propose subject specific recommendations for the organisation of subjects and mentoring within the college's PGCE programme. In this way a general PGCE programme philosophy on mentoring could be differently managed for trainees from subjects of different cohort size.

7. Trainees' evaluations of mentoring from different, secondary age-phase initial teacher education programmes.

The college offers secondary age-phase Qualified Teacher Status via a number of ITT courses and routes. The programmes available are:

- 1 Year PGCE
- 2 Yr PGCE
- 3 Yr BA/BSc (QTS)
- Flexible, modular PGCE

The end result of these parallel courses is that trainees will achieve secondary QTS in a Specialist Subject. Irrespective of the programme followed trainees could apply for the same teaching posts in secondary schools.

The influence of a particular training course on trainees' perceptions and evaluations of mentoring would be useful to know. This knowledge could help in the selection of suitable approaches to mentoring within an ITT programme. This research would also supply more information relating to the impact of the ITT course followed on trainee perceptions of mentoring and the influence this may have for their subsequent professional development.

8. Trainees' evaluations of mentoring from primary age-phase ITT programmes.

The college offers a variety of courses and routes to obtain primary age-phase Qualified Teacher Status. In addition to those courses listed in 7. above a 4Yr, Specialist Subject, BA/BSc (QTS) is available. A comparison of trainees' evaluations of mentoring from the different age phase programmes would be useful. The nature of the trainee population, the content and organisation of the ITT course and the size and organisation of the mentoring schools would all be important factors here.

9. Trainees' perceptions of mentoring in different Teacher Training Providers.

Collaborative work with colleagues in other Teacher Training Institutions could provide information that would help establish the grounds for empirical generalisations being made from the present research in this institution. There would be a number of ethical and political issues to resolve over such work as the data could be used to compare trainees' evaluations of mentoring quality between institutions and thus form a basis for inter-institutional, course quality comparisons. The location and size of the Teacher Training Institution would have a considerable influence too on the nature of the trainee population (TTA 2000).

10. Trainees' evaluation of mentoring in other professions

Mentoring is a term and set of processes that has only recently been formally recognised in teaching i.e. locally, since the Oxford Internship Project and more broadly since the implementation of DFE Circular 9/92 in either September 1993 or 1994. Mentoring exists in a number of other professions and for some (nursing) it has a longer history than in teaching. Cross-profession comparison with, for example other caring professions such as nursing, medicine and veterinary science would be interesting. There may be possibilities that aspects of mentoring from one profession could be usefully transferred to another.

12. BIBLIOGRAPHY

Adey, P.S. and Shayer, M. (1994) *Really Raising Standards: Cognitive Intervention and Academic Achievement*, London, Routledge.

Anderson, E.M. and Lucasse Shannon, A. (1988) 'Toward a Conceptualization of Mentoring', in Kerry, T. and Shelton-Mayes, A. (Eds.) *Issues in Mentoring*, London, Routledge.

Atkinson, P., Delamont, S. and Hammersley, M. (1988) 'Qualitative Research Traditions' in Hammersley, M (Ed.) *Educational Research; current issues*, Vol.1, London, Paul Chapman Publishing.

Ausubel, D.P. (1968) *Educational Psychology: a cognitive view*, New York, Reinhart and Winston.

Baird, R., Fensham, P., Gunstone, R. and White, R. (1991) 'The importance of reflection in improving science teaching and learning' in *Journal of Research in Science Teaching*, Vol. 28, No. 2, pp163-182.

Baird, J.R. and Mitchell, I.J. (Eds) (1986) *Improving the Quality of Teaching and Learning: An Australian Case Study – The PEEL Project*, Melbourne, Monash University Printery.

Ball, S.J. (1987) *The micro politics of the school*, Methuen.

Bassey, M. (1990) 'On the nature of research in education (part 1)', in *Research Intelligence*, BERA Newsletter no. 36, Summer, pp. 35-8.

Bassey, M. (1995) *Creating Education through Research*, Newark, Kirklington Moor Press

Bassey, M. (1999) *Case Study Research in Educational Settings*, Buckingham, Open University Press

Benner, P. (1984) *From Novice to Expert*, Reading, Addison-Wesley.

Berliner, D. (1987) 'Teacher expertise' in The Open University, *Mentoring in secondary schools - a professional development programme, Reading 4*, Milton Keynes, The Open University.

Bevins, S. (1998) 'Teacher education: collaboration or opposition' in *Science Teacher Education*, ASE, Dec. 1998, Vol. 23, p.2-3

Boehm, V.R. (1980) 'Research in the "Real World" : a conceptual model' in *Personnel Psychology*, Vol. 33, Autumn, pp.495-503.

Booth, M. (1993) 'The effectiveness and role of the mentor in school – the students' view' in Kerry, T. and Shelton-Mayes, A. (eds) *Issues in Mentoring*, London, Routledge.

Burrill, P.G.(1995) *An analysis of the perceptions and valuing of Reflective Practice amongst PGCE (sec) Science students at The University College of St. Martin, Lancaster*. Unpublished MA(Ed.) dissertation, Lancaster University.

Burrill, P.G. (1997) *STMA 05, Educational Research in Action: a report on pilot research*, unpublished essay for The Open University, Milton Keynes.

Burrill, P.G. (2000) *Stage 1, Final Report, Doctor of Education*, an unpublished summary document on EdD progress with the Open University, Milton Keynes.

Burn, K (1992) 'Collaborative teaching a mentor's perspective' in The Open University, *Mentoring in secondary schools - a professional development programme, Reading 6*, Milton Keynes, The Open University.

Brooks, V (1997) *The good mentor guide – ITE in secondary schools*, Buckingham, Open University Press.

Brown, A. and Dowling, P. (1998) *Doing Research/Reading Research*, London, Falmer Press.

C.A.T.E. (1992) *The Accreditation of Initial Teacher Training under Circular 9/92*, DFE.

Calderhead, J. and Gates, P. (1993) *Conceptualising Reflection in Teacher Development*. Falmer Press.

Cohen, L. and Manion, L. (1989) *Research Methods in Education – 3rd Ed.*, London, Routledge.

Collison, J. (1994) *The impact of primary school practices on the student experience of mentoring*, paper presented at the annual meeting of the British Educational Research Association, Oxford.

Coolican, H. (1990) *Research Methods and Statistics in Psychology*, London, Hodder and Stoughton.

Daloz, L. (1986) *Effective Teaching and Mentoring*, San Francisco, CA: Jossey-Bass.

De Landsheere, G.(1988) 'History of Educational Research' in Hammersley, M (Ed.) (1993) *Educational Research; current issues*, Volume 1, London, Paul Chapman Publishing.

Denzin, N.K. and Lincoln, Y.S. (eds.) (1994) *Handbook of Qualitative Research*, London, Sage Publications.

Department for Education and Science (1991), *School Based Initial Teacher Training in England and Wales*, London, HMSO.

Department for Education and Science (1992) *The New Requirements for Initial Teacher Training*, Circular 9/92, London, HMSO.

Department for Education and Employment (1997) *High Status, High Standards: Requirements for course of initial teacher training*, Circular 10/97, London, HMSO.

Department for Education and Employment (1998) *Teaching – High Quality, High Status*, Circular 4/98, London, HMSO.

Department for Education and Skills (2002) *Qualifying to teach – Professional Standards for Qualified Teacher Status and Requirements for Initial Teacher Training*, Circular 02/02, London, Teacher Training Agency.

Donaldson, M. (1978) 'Failing to Reason or Failing to Understand?' in Gomm, R. and Woods, P. (Eds.) (1993) *Educational Research in Action*, Paul Chapman Publishing Ltd.

Dreyfus, H.L. and Dreyfus, E. (1986) 'Putting computers in their proper place: analysis verses intuition in the classroom' in Sloan, D. (ed.) *The Computer in Education: a critical perspective*, New York, Teachers' College Press.

Driver, R. (1983) *The Pupil as Scientist*, Open University Press.

Druce, D. and Edmondson, A. (1996) *Advanced Biology Statistics*, Oxford, Open University Press.

Edwards, A. (1997) 'Guests Bearing Gifts: the position of student teachers in primary school classrooms' in *British Educational Research Journal*, Vol. 23, No. 1, pp. 27-37

Edwards, A. and Collison, J. (1996) *Mentoring and developing practice in primary schools*, Open University Press.

Eisner, E.W. and Peshkin, A. (1990) *Qualitative Inquiry in Education* New York Teachers College Press

Eisner, E (1992) 'Objectivity in Educational Research' in Hammersley, M (ed.) *Educational Research; current issues*, Volume 1, London, Paul Chapman Publishing.

Elliott, B. and Calderhead, J. (1993) 'Mentoring for Teacher Development - Possibilities and Caveats' in Kerry, T. and Shelton-Mayes, A. (eds) *Issues in Mentoring*, London, Routledge.

Ely, M., Vin, R. Dowling, M and Anzul, M. (1997) *On Writing Qualitative Research*, London, Falmer Press.

Eraut, M. (1994) *Developing Professional Knowledge and Competence* London Falmer Press

Eraut, M (1995) 'Schon shock : A case for reframing Reflection-in-Action' in *Teachers and Teaching*, theory and practice, Vol. 1, No. 1, pp.9-22.

Foster (1999) 'School-based initial teacher training in England and France: trainee teachers' perspectives compared', in *Mentoring and Tutoring*, Vol. 7, No. 2, pp. 131-143.

Freeman, R., Kuit, J.A. and Reay, G. (2001) 'Experiences of reflective teaching' in *Active Learning in Higher Education*, Vol. 2. No. 2, pp.128-142.

Frey, J.H. and Mertens-Oishi, S. (1995) *How to conduct interviews by telephone and in person*, London, Sage.

Fuller, F.F and Brown, O.H. (1975) 'Becoming a teacher' in Ryan, K. (ed.) *Teacher Education*, National society for the study of Education, 74th Yearbook, Part II, University of Chicago Press.

Gall, M.D., Borg, W.R. and Gall, J.P. (1996) *Educational Research* 6th Edition New York Longman

Gardner, H. (1984) *Frames Of Mind Theory Of Multiple Intelligences*, Heinemann, 1984.

Gergen, K.J. and Gergen, M.M. (1991) *Reflexive Methodology* in Steiner, F. (Ed.) *Analyzing Everyday Explanation: A Casebook of Methods*, London, Sage.

Goodlad, S. (Ed.) (1998) *Mentoring and Tutoring by Students*, London, Kogan Page.

Hammersley, M (1993) 'On the Teacher as Researcher' in Hammersley, M (ed.) *Educational Research; current issues*, Volume 1, London, Paul Chapman Publishing.

Handal, G. and Lauvas, P. (1987) 'The Practical Theory of Teachers' in Whitelegg, E. and Thomas, J. (Eds.) (1993) *Challenges and Opportunities for Science Education*. Paul Chapman Publishing.

Hagger, H and McIntyre, D. (1994a) 'Mentor Roles and Qualities' in The Open University, *Mentoring in Secondary Schools - a professional development programme*, Reading 2, Milton Keynes, The Open University.

Hagger, H and McIntyre, D. (1994b) 'A School-wide Concept of Mentoring' in The Open University, *Mentoring in Secondary Schools - a professional development programme*, Reading 2, Milton Keynes, The Open University.

Hagger, H. and McIntyre, D. (1994c) *Mentors in schools – developing the profession of teaching*, London, David Fulton Publishers.

Hargreaves, A. and Fullan, M.G. (Eds.) (1992) *Understanding Teacher Development* New York Teachers' College Press

Harlen, W. (1992) Research and the development of Science in the primary school in *International Journal of Science Education* Vol.14, no. 5, pp. 491-503

Hart, C. (1998) *Doing a Literature Review*, London, Sage.

Hitchcock, G and Hughes, D. (1989) *Research and the Teacher - A Qualitative Introduction to School-based Research*, London, Routledge.

HMI (2001) *Personal communication with senior HMI*, 23rd March, London.

Hobson, A. (2002) 'Student Teachers' Perceptions of School-Based Initial Teacher Training (ITT)', in *Mentoring and Tutoring*, Vol. 10, No. 1, pp. 5-20.

Hoyle, E. and John, P.D. (1995) *Professional Knowledge and Professional Practice* London, Cassell

Ireson, G. (1998) 'M is for Mentor' in *Science Teacher Education*, ASE, Dec. 1998, Vol. 23, p.4

Jacques, K. (1992) 'Mentoring in Initial Teacher Education' in *Cambridge Journal of Education*, Vol. 22, No. 3, pp.337-350.

Johns, C. (2000) *Becoming a Reflective Practitioner*, Blackwell

Jones, M. (2000) 'Trainee Teachers' Perceptions of School-based Training in England and Germany with Regard to their Preparation for Teaching, Mentor Support and Assessment' in *Mentoring and Tutoring*, Vol. 8, No. 1, pp.63-80.

Jones, M. (2001) 'Mentors' Perceptions of Their Roles in School-based Teacher Training in England and Germany' in *Journal of Education for Teaching*, Vol. 27, No. 1, pp. 75-94.

Kajs, L. T. (2002) 'Framework for Designing a Mentoring Program for Novice Teachers', in *Mentoring and Tutoring*, Vol. 10, No.1. pp. 57-69.

Kemmis, S (1988) 'Action Research' in Hammersley, M (ed.) *Educational Research; current issues*, Volume 1, London, Paul Chapman Publishing.

Kolb, D. A. (1984) *Experiential Learning: Experience as a Source of Learning and Development*, New Jersey, Prentice-Hall.

Kvale, S. (1996) *Interviews – an introduction to qualitative research interviewing*, London, Sage.

Lewis, L. and Dowling, L.A. (1992) 'Editorial' in *Adult Learning*, Vol. 13, No. 2.

Liversidge (2002) *Perceptions of Effective Mentoring*, EdD Thesis, The Open University

Lock, R. (1997) 'Student teachers and mentors working together' in *Science Teacher Education*, ASE, Sept. 1996, Vol. 17, p.4

Lucas, K.F. (2001) 'The Social Construction of Mentoring Roles', in *Mentoring and Tutoring*, Vol.9, No.1, pp. 23-47.

Lunt, N., McKenzie, P. and Powell, L. (1993) 'The Right Track': teacher training and the new right: change and review in *Educational Studies*, Vol. 19 no. 2, pp. 35-45.

Mackinnon, A.M. (1987) 'Detecting reflection-in-action among pre-service elementary science teachers', in *Teaching and Teacher Education*, Vol.3, No.2, pp. 135-45.

Mattingly, C. (1991) 'Narrative Reflections on Practical Actions: two Learning Experiments in Reflective Storytelling' in Schon, D.A. (ed) *The Reflective Turn*, San Francisco, Jossey-Bass.

Maynard, T. and Furlong, J. (1993) 'Learning to Teach and Models of Mentoring' in Kerry, T. and Shelton-Mayes, A. (eds) *Issues in Mentoring*, London, Routledge.

Monk, M. and Dillon, J. (1995) *Learning to Teach Science*, London, Falmer Press

Monk and Martin (1995) *Learning to teach Science: activities for student teachers and mentors*, Falmer.

Nicholls, G. (1999) *Learning to Teach*, London, Kogan Page

Oppenheim, A.N. (1992) *Questionnaire Design, Interviewing and Attitude Measurement*, London, Continuum.

Orensen, P. (2002) *Personal communication at Association for Science Education Conference*, 5th January, Liverpool University.

Pascall, D. (1992) “*Insight*” – *Autumn 1992 Edition*, Department of Employment.

Patel, S. and Winslow, S (1998) ‘A professional diary: a helping hand’ in *Science Teacher Education*, ASE, Dec. 1998, Vol. 23, p.6-7.

Peters, J. (1991) ‘Strategies for Reflective Practice’ in Brockett, R (ed.) *Professional Development for Educators of Adult and Continuing Education*, No. 51, San Francisco, Jossey-Bass.

Phillips, D.C. (1989) ‘Subjectivity and Objectivity: an objective inquiry’ in Hammersley, M (Ed.) *Educational Research; current issues*, Volume 1, London, Paul Chapman Publishing.

Popper, K. (1963) *Conjectures and refutations: the growth of scientific knowledge*, Routledge.

Richards, C.; Simco, N. and Twiselton, T. (Eds.) (1998) *Primary Teacher Education – High Status? High Standards?*, London, Falmer Press.

Richardson, J.T.E. (ed.) (1996) *Handbook of Qualitative Research Methods*. Leicester, British Psychological Society.

Roberts, A. (2000) 'Mentoring Revisited: a phenomenological reading of the literature' in *Mentoring and Tutoring*, Vol. 8, No.2, pp. 145-170.

Roberts, D.A. and Chastko, A.M. (1990) 'Absorption, refraction, reflection: an exploration of beginning science teacher thinking' in *Science Education*, Vol. 74, No. 2, pp. 197-224.

Schon, D. (1983) *The Reflective Practitioner : How professionals think in action*, London, Basic books.

Schon, D. (1987) *Educating the Reflective Practitioner : Towards a new design for teaching and learning in the professions*. Jossey-Bass.

School Improvement Support Unit (1994) *Background material on learning theories*, Open University Press.

Shulman. L.S. (early - mid 1980's?) 'Those Who Understand: Knowledge Growth In Teaching' in The Open University, *Mentoring in Secondary Schools - a professional development programme, Reading 10*, Milton Keynes, The Open University.

Silverman, D.(Ed.) (1997) *Qualitative Research: Theory, Method and Practice*, London, Sage.

Soper, P. (1992) 'Resistance, re-examination and resolution: the three R's of my reflective practice' in *Adult Learning*, Vol. 3, No. 2.

Sorensen, P. (2002) Personal Conversation on 5th January at Association of Science Education Conference, Liverpool University.

St Martin's College (1998) *Secondary ITE 1 Year PGCE Programme – Definitive Programme Document*.

St Martin's College (2000) *PGCE (sec) Assessment of Trainee Teachers, 2000-2001*.

St Martin's College (2000) *Secondary ITE Partnership 1 and 2 year programmes QTS and PGCE General Information 2000-2001*.

St Martin's College (2000) *Observing Teaching and Learning Booklet; PGCE Assessment of Trainee Teachers 2000-2001*.

St Martin's College (2000) *PGCE (sec) Modern Languages Course Booklet, 2000-2001*.

St Martin's College (2000) *PGCE (sec) Partnership Schools, Secondary ITE, Memorandum of Co-operation, 2000-2001*.

St Martin's College (2000) *PGCE (sec) Science Course Booklet, 2000-2001*.

Stenhouse, L.(1975) 'The teacher as researcher' in Hammersley, M. and Hargreaves, A. (Eds) *Curriculum Practice: some sociological case studies*, Lewes, The Falmer Press.

Teacher Training Agency (1997) *Standards for the Award of Qualified Teacher Status*, Teacher Training Agency.

Teacher Training Agency (2000) *Performance Profiles*, Teacher Training Agency.

The Office For Standards In Education (1998) *Report on secondary initial teacher training partnership based on St. Martin's College, Lancaster*, OFSTED.

The Open University (1980) *P234 Curriculum in Action*, Milton Keynes, The Open University.

The Open University (1991) *E271, Curriculum and Learning*, The Open University.

The Open University (1995) *E830, Mentoring*, Milton Keynes, The Open University.

The Open University (1996) *E835, Educational Research in Action*, Milton Keynes, The Open University.

The Open University (1994) *ES 821, Science Education*, Milton Keynes, The Open University.

The Open University (1994) *ES 621, Professional Development in Action - Methodology Handbook*, The Open University.

The Open University (1999) *E910 Doctorate in Education*, Milton Keynes, The Open University.

The Open University (1994) *E824 Educational Research Methods*, Milton Keynes, The Open University.

The Open University (2001) *The Open University Flexible PGCE: partnership information*, Huddersfield, Charlesworth and Co. Ltd.

Tickle, L. (2000) *Teacher Induction: The Way Ahead*, Open University Press, Buckingham.

Tomlinson, P. (1995) *Understanding Mentoring*, Open University Press.

Tresman, S. and Edwards, D. (1993) 'Reflecting on practice: some illustrations' in Whitelegg, E., Thomas, J. and Tresman, S. (Eds) (1993) *Challenges and Opportunities in Science Education*, Paul Chapman Publishing Ltd.

Verloop, N., Vermunt, J.D. and Zanting, A. (2001) 'Student teachers' beliefs about mentoring and learning to teach during teaching practice', in *British Journal of Educational Psychology*, Vol. 71, No. 1, pp. 57-80.

Walford, G. (1991) *Doing Educational Research*, London, Routledge.

Walford, G. (1998) *Doing Research about Education*, London, Falmer Press.

Paul Geoffrey Burrill

R0455622

**" An evaluation of trainee teachers' perceptions
of mentoring"**

APPENDICES

DOCTOR OF EDUCATION (EdD)

April 2003

APPENDIX 1

Pages 294 – 295

[SMC (2000), Secondary ITE Partnership 1 and 2 Year Programmes QTS and PGCE General Information 2000-2001 annex 5]

CONTENT AND STRUCTURE OF PROGRAMME

The One Year Full Time QTS & PGCE Programme

Under DfEE circular 4/98 the main one year full time programme is 36 weeks of which 24 weeks have to be spent in school. The programme comprises one year full time PGCE courses in most of the subjects of the school curriculum, based in Lancaster and Carlisle, a one year full time European PGCE Maîtrise FLE Modern Foreign Languages course based in Chislehurst, and a two year PGCE conversion course in Mathematics and in Information Technology based in Lancaster. The first year of the two year courses consists of subject studies and the second year follows the one year full time programme.

Structure

The structure of the programme is based on all trainees having a sustained experience in at least two schools. The structure of the one year programme is set out below.

Content

The training undertaken by each trainee is based on a careful blend of school and college experiences. The training covers the whole of the Standards set out in DfEE circular 4/98 including Annex B of those standards. The assessment and reporting system through the Personal Development forms is the check that ensures that all trainees receive comparable experiences.

Components

The programme content is made up of four components

- Subject Curriculum Studies
- General Professional Studies
- School Experience
- Professional Tutorials

and eight phases

- | | | | |
|------------|-------------|-------------------|---|
| • Phase 1. | Weeks 1&2 | College charge | |
| • Phase 2. | Weeks 3-8 | A 2-3 phase | } |
| • Phase 3. | Weeks 9-13 | A 4-1 phase | } |
| • Phase 4. | Weeks 14-17 | A Mini-block | } |
| • Phase 5. | Weeks 18-22 | College recharge | |
| • Phase 6. | Weeks 23-27 | B first half | } |
| • Phase 7. | Weeks 28-34 | B second half | } |
| • Phase 8. | Weeks 35-36 | College discharge | |
- School A
- School B

2000-2001 COLLEGE Phase 1 SCHOOL A Phase 2											
	11 Sept	18 Sept	25 Sept	2 Oct	9 Oct	16 Oct	23 Oct	30 Oct	6 Nov		
College	5	5	3	3	3	3	2 (26,27th)	3	3		
School	0	0	2	2	2	2	0 (23-25 th Hols)	2	2		
College Week	2	3	4	5	6	7	8	9	10		
School Week	2	3	4	5	6	7	8	9	10		
Phase 3											
	13 Nov	20 Nov	27 Nov	4 Dec	11 Dec	18 Dec	Christmas	1 Jan	8 Jan		
College	1	1	1	1	1	0	Break	0	0		
School	4	4	4	4	4	2	20 Dec - 3 Jan (Lancs) 7 Jan (Cumbria)	2	5	Cumbria Term Starts 8 Jan	
College Week	11	12	13	14	15	16	16/17	18	19		
School Week	11	12	13	14	15	16	16/17	18	19		
SCHOOL B Phase 6											
	15 Jan	22 Jan	29 Jan	5 Feb	12 Feb	19 Feb	26 Feb	5 Mar	12 Mar		
College	0	0	0	1 (8 Feb)	5	5	5	1 (5 Mar)	0		
School	5	5	5	1 (9 Feb) Changeover week (5, 6, 7 Feb Holiday)	0	0	0	4 (6-9 Mar)	5		
College Week	20	21	22	23	24	25	26	27	28		
School Week	20	21	22	23	24	25	26	27	28		
Phase 7											
	19 Mar	26 Mar	2 Apr	Easter	23 Apr	30 Apr	7 May (May Day 7 May)	14 May	21 May		
College	0	0	0		0	1 (4 May)	0	0	0		
School	5	5	5		5	4	4	5	5		
College Week	29	30	31	32/33	34	35	36	37	38		
School Week	29	30	31	32/33	34	35	36	37	38		
COLLEGE Phase 8											
	28 May	4 June	11 June	18 June	25 June	2 July					
College	Half Term	0	0	0	5	5					
School	Holiday	5	5	5	0	0					
College Week	39	40	41	42	43	44					
School Week	39	40	41	42	43	44				Revised 3.3.00	

In addition there will be 3 “floating” days in school to be arranged by subjects for specific purposes

APPENDIX 2

St Martin's College, Lancaster

PGCE 1 Yr (sec) Science / Modern Foreign Languages students

Questionnaire on experiences and perceived value of mentoring practices with respect to lesson planning, delivery and evaluation.

I would be grateful if you would *complete this questionnaire*. The results should assist College Tutors and School Mentors by providing evidence of *PGCE students' perceptions of mentoring processes* directly related to their classroom teaching. The questionnaire survey results, along with documentary, interview and observational data, will be incorporated into a piece of Educational Research I am undertaking. 1999/2000 saw a pilot study. The results from this research have been used to inform the full study which is to take place with your 2000/2001 cohort.

The key focus of the research will be:

- (i) To investigate mentoring models and strategies used with PGCE students with the aim of identifying those aspects, perceived by students, as most valuable for lesson planning, delivery and evaluation.
- (ii) To discover whether students from different subjects share the same opinions on the value of mentoring roles and strategies.

September 1999 saw the start of a “new” PGCE programme. The student-orientated data should be valuable for processes of illumination, evaluation and modification which should help improve aspects of mentoring within the PGCE (secondary) programme at St Martin's College.

Thank-you for your assistance, Paul Burrill, 24/11/00.

Working with: Alan Knott, Course Leader PGCE (sec) Science
Anna Bartrum, Course Leader PGCE (sec) Modern Foreign Languages

Notes on completing the questionnaire

1. Closed response questions e.g. Yes, No and 1 – 5 point scale questions.

Please circle the most appropriate response in this type of question.

2. For those questions offering a 5-point scale response use the following key:

Key : 1 = very important or helpful
2 = fairly important or helpful
3 = OK
4 = of little importance or help
5 = not important or helpful at all

3. Open response questions e.g. questions where you are invited to add your comments.

Please add your comments, as requested, continuing over-leaf if more space is needed.

SECTION A - student details

Name : Gender : Male / Female Age :years

PGCE Subject : SCIENCE / MODERN FOREIGN LANGUAGES

Name of School for Teaching Placement in :
Autumn and Early Spring Term (School “A”):
Late Spring and Summer Term (School “B”):

(Only enter your own and the school names if you wish to do so. Those respondents giving names may be invited to a follow-up interview, lasting 30-40 minutes.)

SECTION B - Value of documentary material

1. (a) Have you read the information, referring to mentoring within the PGCE programme, from the following sources?
- | | | |
|--|-----|----|
| (i) Secondary ITE Partnership 1 and 2 Year Programmes QTS and PGCE 1999-2000 | Yes | No |
| (ii) Observing Teaching and Learning Booklet | Yes | No |
| (iii) PGCE Assessment of Trainee Teachers 1999-2000 | Yes | No |
| (iv) Science or MFL PGCE Course Booklet | Yes | No |
- (b) (i) Have you been given any other literature on mentoring in ITE? Yes No
If yes please specify the material
.....
- (ii)How valuable has the documentary material on mentoring been to you? 1 2 3 4 5
- (iii)Please add your comments on the value of the PGCE mentoring documents
.....
.....

SECTION C - Mentoring roles, models and strategies

2. (a) Have mentoring roles (eg of College Tutor, Professional Mentor, Subject Mentor and yourself as Mentee) been discussed with you?
- | | | |
|---------------------------|-----|----|
| (i) In college work | Yes | No |
| (ii) In school-based work | Yes | No |
- (b) How important is it to have these roles explained to you? 1 2 3 4 5
3. What does mentoring, within the PGCE programme, mean to you?.....
.....
.....
4. How important is it to have the mentoring aspects of the PGCE course explained to you? 1 2 3 4 5

SECTION D - collegial / interpersonal dimension

Before answering the questions below consider how *your involvement with others* has helped you:

- (i) to highlight significant issues in your teaching,**
- (ii) to re-frame these issues i.e. to look at them from different perspectives,**
- (iii) to consider the modifications needed in future lessons for an improved quality of teaching and pupil learning.**

5. Observation of experienced teachers "in action"

- (a) How helpful has the observation of experienced teacher's lessons been? 1 2 3 4 5
- (b) How many different teachers have you observed?
- (c) Approximately how many hours of observation have you done?
- (d) Have you spent enough time observing lessons? Yes No
- (e) Please add your comments on the value of lesson observation
- (i)helpful aspects
.....
- (ii) unhelpful aspects
.....

6. (a) What proportion of the lessons you observed were discussed, in detail, before the lesson with the teacher?
- (i) none
(ii) a quarter
(iii) a half
(iv) three quarters
(v) all of them
- (b) How important is it to discuss the lesson plan with the class teacher before the lesson is observed?
- 1 2 3 4 5

7. (a) What proportion of the lessons you observed were discussed and evaluated, in detail, after the lesson with the teacher?
- (i) none
- (ii) a quarter
- (iii) a half
- (iv) three quarters
- (v) all of them
- (b) How important is it to evaluate an observed lesson with the teacher?
- 1 2 3 4 5

8. (a) How important has the, “Observing Teaching and Learning” / “Reflections on Practice, ML2” booklet been? 1 2 3 4 5
- (b) Please list the advantages of using this booklet
-
- (c) Please list the disadvantages of using this booklet
-

9. Involvement in collaborative (team) teaching with experienced teachers
- (a) How important has the collaborative teaching of lessons been? 1 2 3 4 5
- (b) How many different teachers have you collaboratively taught lessons with?
- (c) Approximately how many hours of collaborative teaching have you done?
- (d) Have you spent enough time undertaking collaborative teaching? Yes No
- (e) Please add your comments on the value of collaborative teaching

(i) helpful aspects

.....

(ii) unhelpful aspects

.....

10. (a)What proportion of the lessons you collaboratively taught were planned, in detail, before the lesson with the teacher?
- (i) none
- (ii) a quarter
- (iii) a half
- (iv) three quarters
- (v) all of them
- (b)How important is it to prepare jointly a lesson that will be taught collaboratively?1 2 3 4 5

11. (a)What proportion of the lessons you collaboratively taught were carefully discussed and evaluated after the lesson with the teacher?
- (i) none
- (ii) a quarter
- (iii) a half
- (iv) three quarters
- (v) all of them
- (b) How important is it to evaluate a collaboratively taught lesson with the teacher? 1 2 3 4 5

12. (a) How many lessons, in school, have you planned, taught and evaluated with other PGCE students?
- (b) How valuable is the strategy of peer collaborative teaching? 1 2 3 4 5
- (c) Please add your comments on the value of peer collaborative teaching:
- (i) helpful aspects
-
- (ii) unhelpful aspects
-

13. Involvement in solo (individual) teaching of lessons
- (a) How important has solo teaching of lessons been? 1 2 3 4 5
- (b) How many different teachers have you taken lessons from?
- (c) Approximately how many hours of solo teaching have you done?
- (d) Have you spent enough time undertaking solo teaching? Yes No
- (e) Please add your comments on the value of solo teaching:
- (i) helpful aspects

.....
(ii) unhelpful aspects
.....

14. (a)What proportion of the lessons you taught on your own were planned, in detail, before the lesson with the teacher?
(i) none
(ii) a quarter
(iii) a half
(iv) three quarters
(v) all of them
- (b) How important is it to prepare jointly a lesson that will be taught by you? 1 2 3 4 5

15. (a)What proportion of the lessons you taught on your own were discussed and evaluated, in detail, after the lesson with the teacher?
(i) none
(ii) a quarter
(iii) a half
(iv) three quarters
(v) all of them
- (b) How important is it to evaluate a lesson you have taught with the teacher? 1 2 3 4 5

16. How important have reflective practices been in your PGCE course? 1 2 3 4 5

- 17 (a) Do you keep a reflective diary for your professional use? Yes No
(b) *If yes*, how important has this diary been? 1 2 3 4 5
(c) Comments upon keeping a reflective diary:
(i) advantages.....
.....
(ii) disadvantages
.....

18. How much time, on average, would you spend preparing for an hour of solo teaching time?
.....

19. (a) Did you always complete a written 'end of lesson' evaluation for the lessons you taught? Yes No
(b) How much time (on average) did you spend reflecting upon an individual lesson (which you had taught) and in writing its evaluation? minutes.
(c) How important are these personal, formal, lesson evaluations to you? 1 2 3 4 5
(d) Please add your comments on personal lesson evaluations:
(i) helpful aspects
.....
(ii) unhelpful aspects
.....

APPENDIX 3

Pages 302 – 304

APPENDIX 3

Appendix 3. Draft 2 of the interview proforma – used at the end of early teaching in
the main study (Feb.- Mar. 2001).

St Martin's College, Lancaster

PGCE 1 Yr (sec) Science / Modern Foreign Languages students

***'Paired student' interviews on experiences and perceived value of mentoring
practices with respect to lesson planning, delivery and evaluation.***

PGCE Science or PGCE Modern Foreign Languages (Circle as appropriate)

Date of interview:February / March 2001

Student names : and

School :

Introduction to students

* Thank-you for attending today and for completing the questionnaire on mentoring. The interview/discussion should last 30 - 45 minutes.

* I'm interested in PGCE (sec) Science / MFL student experiences and perceptions of mentoring. I am particularly interested in those aspects of mentoring that are valuable for your lesson planning, delivery and evaluation.

* I'm undertaking this work to pursue an individual interest and also to complete an academic study with the Open University. I do hope that the information from the PGCE student perspective will enable improvements to be made for future mentoring provision within the PGCE programme.

* The questions set form a consistent, yet loose structure to the interview. The questions are the same for all interviewees and refer to your experiences of mentoring during the PGCE course. Please feel free to elaborate on any detail in your answers. Anonymity will be ensured for all responses.

* I will guide you through the interview and Linda, The Science and Technology Department Secretary will make notes.

Section A General Mentoring Aspects

1. What does mentoring, within the PGCE programme, mean to you?

How has mentoring helped you?

How has mentoring hindered you?

2. How has your pair / small group placement in the school influenced your mentoring experiences?

If needed ask about advantages / disadvantages.

Section B Mentoring Strategies

3. The questionnaire results showed that many students spend very little time reading about mentoring in PGCE booklets.

Why do you think this is so?

Should anything be done to encourage more reading of written information?

4. (a) *Assertion 1* – “Lesson observation was a good idea early on in the PGCE course”
Do you agree with this?

(b) Why is it that most observed lessons are not discussed, in detail, with the teacher before observation?

(c) Is it important to establish the structure and focus of a lesson before it's observed?

5. (a) *Assertion 2* – “ Collaborative teaching (with an experienced teacher) undermines your authority in class “
Do you agree with this?

(b) Compared to observation and individual (solo) teaching why is so little time spent on collaborative teaching with the usual class teacher?

6. (a) *Assertion 3* – Individual (solo) teaching ...” is the best possible way to learn how to teach “
Do you agree with this?

(b) What factors influence the planning of solo lessons with the usual class teacher?

Section C Mentoring Models

7. What makes a good :
 - (a) Subject Mentor?
 - (b) Professional Mentor?
 - (c) College Mentor?
8. How valuable to you, in developing your teaching capabilities, has it been to complete PD files, Tracking Documents/Formative Targets documents, Observation/Reflections on Teaching booklets etc.?
9. This question is about reflecting on / evaluating your teaching.
 - (a) When do you reflect on your teaching?
 - (b) How do you do this?
 - (c) What's recorded and where?
 - (d) Why do you reflect on your teaching?
10. Is there anything else you'd like to say about mentoring?

Thank-you for your help in this interview

APPENDIX 4

Appendix 4. Introductory letter to trainees inviting them to interview

MEMORANDUM

To:a teaching placement pair of trainees

From : Paul Burrill, 16/2/01.

Case Study Interviews - follow-up discussion on experiences and perceived value of mentoring

Some Science and Modern Foreign Languages PGCE students are being invited to an interview / discussion as a follow-up to a questionnaire survey, on mentoring, which you took part in last term. Hopefully this will enable me to gain a greater insight into mentoring issues which are of importance to PGCE students. A pair of students will be interviewed together. I will be the interviewer with the departmental secretary noting down some of the comments made. The discussions should last between 30-45 minutes.

You have been selected as you kindly completed the questionnaire sent to you last term and gave your consent to be interviewed. You were also one of a pair/group of students in the same department for your School A Teaching Practice.

I'd be very grateful if you'd attend together for the discussion. The meetings will be held in Sc8a (beyond the Chemistry lab. Sc8). Your appointment time is shown below.

Please consult with your partner and confirm (note under my door) by Monday 19th February that you can attend as stated. If this is not possible please see me to arrange an alternative appointment.

Thanks a lot, Paul.

Appointment in Sc8a :

MONDAY 19th February at 10am:names of trainees

APPENDIX 5

Appendix 5. Introductory letter sent to trainees and their mentors about the observational study (Jan. Feb. 2001)

Fax to: 'X' School – ** ***

(Professional Mentor)

(Subject Mentor)

Dear

(PGCE student)

22nd January 2001

This letter is being sent because I have arranged with, *****, a College Mentor for PGCE Science, to observe **** (*the trainee*) and the subsequent review of her work on *Thursday 25th January from 11.15am.*

I am a member of the Department of Science and Technology at St.Martin's College. I am undertaking research into aspects of mentoring within the 1 Year PGCE (secondary) programme. A particular interest concerns the students' perceptions of mentoring. This year I am collecting data, part of which will be obtained from the observation of mentors working with their PGCE students. PGCE students are also being given questionnaires and interviews. Documentary evidence about mentoring within the PGCE programme is being examined too. In the near future comparisons with other HEIs, mentoring in other professions and published work on mentoring will be made.

I hope that the findings of my research (which will be published in 2002) will provide additional, new information, which can be used to develop and enrich the quality of mentoring within the PGCE course.

I do hope that you will support my presence at this event. I will be observing aspects of mentoring for research purposes. I will not be actively involved in any discussion / assessment of the student. My aim is to, 'see it as it is' to get a, 'fly on the wall' picture of events. Confidentiality will be respected and any observations will be recorded anonymously.

Thank-you, in anticipation of your support,

Yours sincerely,

Paul Burrill (Senior Lecturer in Biology and Science Education)

(Home Tel. ** *. E-mail address *****)**

APPENDIX 6

**Appendix 6. The proforma used to record observational data about trainees and
their mentors (Jan. – Feb. 2001).**

St Martin's College, Lancaster

PGCE 1 Yr (sec) Science / Modern Foreign Languages students

Student / Mentor observation proforma – January 2001

***Student Observation* of perceived value of mentoring practices - with respect to
lesson planning, delivery and evaluation.**

PGCE Science / Modern Foreign Languages. Date of observation: 2001

Duration of pre-observation meeting:mins

Class observed: Duration of lesson:mins

Location and duration of Tri-Partite Review:mins [sketch of
setting and seating arrangements]

Student name :

School Subject / Professional Mentor:

College Mentor:

School :

A. Preparation made by student for lesson observation and Tri-Partite Review

1. Welcome/thanks offered to mentors on arrival/at departure e.g. met at school reception / staff room etc.
2. Student's awareness and up-to-dateness of Professional Development Files, Tracking Document/Formative Targets Booklet.
3. Photocopies of Lesson Plan provided for mentors, Teaching File available and a logical/coherent, up-to-date document. Lesson evaluations and mentor crit sheets included.
4. Other comments on the student's preparations for the review

B. Integration of mentor observers in observed lesson

5. Siting of observers in lesson considered.
6. Mentors / visitors introduced to class
7. Signs of mentor-mentee interaction in observed lesson e.g. eye-contact, class handouts given to mentors, conversation, involvement in group/practical work.

8. Other comments on how mentors were integrated into the observed lesson

C. Post-lesson evaluation and Tri-Partite Review.

9. Voice / manner of student conveys interest/enthusiasm (in response to suggestions from the mentors)

10. Body language – eye contact, posture (leaning forward), seating positions

11. Student keen to receive and act on advice and to engage in discussion

12. Student is competence / standards focussed

13. Student values reflective discussion which constructs new understanding of phenomena

14. Setting of new targets is seen as necessary and appropriate

15. Humour and enjoyment shared

16. Deployment of talking time between student, Subject Mentor and College Mentor

17. Other comments on the post-lesson evaluation and Tri-Partite Review

APPENDIX 7

Appendix 7. Questions about a trainee's end of teaching practice review meeting, the Tri-Partite Review (Feb. – Apr. 2001).

Tri-Partite Review questions to trainees, Subject Mentors and college tutors

1. Location, location, location – does the venue and seating arrangement matter?
2. How long is needed to (realistically) undertake a Tri-Partite Review.
3. What are the pros and cons of a school-based pre-meeting (student and Subject Mentor), prior to the Tri-Partite Review?
4. Should the review concern itself with each specific section of PD3/Tracking Document or focus on the key strengths and areas for development?
5. What should be the role of the College Mentor in the Tri-Partite Review?
6. What should be the distribution of talking time between student, Subject Mentor and College Mentor?
7. Should the review confirm/check the achievement of “standards for the award of QTS”?
8. Should the review encourage reflection/ critico-analytical thought from the student? If so how is this best achieved?
9. How much do students use and value the Tracking Document?
10. How often are the student's comments in the Tracking Document read and discussed with them?
11. What do you think about the amount and structure of the paperwork concerned with the end of practice review?
12. Are there any other points related to the Tri-Partite Review you'd like to make?

APPENDIX 8

Appendix 8. Examples of the procedure used for summarising data from the questionnaire surveys (closed and open questions).

PGCE (sec) SCIENCE - Early Teaching questionnaire (Nov. 28th 2000). Summary data to closed questions. 48 respondents (100% population)

SECTION A – student details

94% declared personal details.

60% female. Mean age female = 26.6 +/- 6.0 years.

40% male. Mean age male = 28.1 +/- 4.9 years.

Overall mean age = 26.7 +/- 5.6 years.

SECTION B - Value of documentary material

1. (a) Have you read the information, referring to mentoring within the PGCE programme, from:

- | | | |
|---|----------|---------|
| (i) Secondary ITE Partnership Programme Booklet 1999-2000 | Yes, 35% | No, 65% |
| (ii) Observing Teaching and Learning Booklet | Yes, 80% | No, 20% |
| (iii) PGCE Assessment of Trainee Teachers 1999-2000 | Yes, 62% | No, 38% |
| (iv) Science or MFL PGCE Course Booklet | Yes, 77% | No, 23% |

- (b) (i) Have you been given any other literature on mentoring in ITE? **Yes, 2%** **No, 98%**

- (ii) How valuable has the documentary material on mentoring been to you? *Mean (mode)* 3.1 (3)

SECTION C - Mentoring roles, models and strategies

2. (a) Have mentoring roles been discussed with you?

- | | | | |
|------|----------------------|-----------------|----------------|
| (i) | In college work | Yes, 96% | No, 4% |
| (ii) | In school-based work | Yes, 83% | No, 17% |

- (b) How important is it to have these roles explained to you? **1.8 (1)**

4. How important is it to have the mentoring aspects of the PGCE course explained to you? **1.9 (1)**

SECTION D - collegial / interpersonal dimension

- ## 5. Observation of experienced teachers "in action"

- (a) How helpful has the observation of experienced teacher's lessons been? **1.5 (1)**

- (b) How many different teachers have you observed? **9.3 +/- 9.2 (range 3-15)**

- (c) Approximately how many hours of observation have you done? **37.3 +/- 22.1h (range 10-100)**

- (d) Have you spent enough time observing lessons? **Yes, 76% No, 24%**

**PGCE (sec) MODERN FOREIGN LANGUAGES - End of course questionnaire
(June/July 2001). Summary data to open questions.
31 respondents (78% population)**

1(b) (i) Have you been given any other literature on mentoring in ITE?

(iii) Please add your comments on the value of the PGCE mentoring documents

Information on what's expected from all parties (4), Absolutely vital / very useful (2), The MFL Course Booklet was the most useful (2), Give it to mentors and make sure they read it (2).

2. What should be the purposes of mentoring for students on a PGCE course?

Support (14), (Positive) feedback (12), (Constructive) advice (11), Help (9), Encouragement (4), Guidance (8), Help with lesson planning (5), Checking you're OK / emotional support (4), Constructive criticism (4), Sharing good practice (4), Setting targets (4), Modeling good practice / role model (3), Keeping you on the right track (2), An experienced teacher (2), Help with job applications (2), Reviewing your teaching progress (2).

3. Did the PGCE course you followed supply all these mentoring needs?

Excellent / good support in both school and college (9), Poor mentoring in either A or B placement (6), Mentor did not give enough time to me in either A or B placement (4), Good mentor relationships (2), Good GPS programme (2), Sometimes the mentors could have been more supportive (2).

4. How has mentoring helped you in your professional development as a teacher?

Useful / Constructive feedback (8), It's helped a lot / enormously (8), Good / excellent advice (6), Helped me to see how schools work / in the UK (5), Helped me to plan lessons (4), Helped me to progress (3), Set clear targets (2), Helped with discipline (2), Helped me to think about things (2), Virtually no help from Subject Mentor in either school (2), Lots of help / support from college staff (2).

5. How helpful has the PGCE course been in developing your own subject knowledge and understanding for your subject specialism(s)?

My subject knowledge hasn't developed (11), my knowledge of how to teach / apply my subject has developed / developed well (9), No/ not enough focus on Italian (5), I learned a lot (3), My confidence improved (2), helped me to cope with teaching (2), I will never teach in England (2).

6. How helpful has the PGCE course been in preparing you professionally to enter the teaching in a secondary school?

I've gained a lot of experience about teaching (10), I know what to do at KS 3 (4), I still feel insecure / needed more teaching at KS 4 (4), Feel well prepared (3), Very helpful (3), Gained confidence (2), No 'A' level teaching. Excellent support (3), Good subject knowledge (2).

APPENDIX 9

Appendix 9. Example of the procedure used for summarising data from the observational survey.

PGCE (sec) SCIENCE and MODERN FOREIGN LANGUAGES

End of 1st Teaching Placement – observational data (Jan./Feb. 2001).
Summary data. 4 Science and 4 MFL observations.
8 students in 6 schools with 6 Subject Mentors and 6 College Tutors.

Date of Observations: End Jan./Start Feb.2001- end of 1st Teaching Placement. This was at the time of the second college tutor visit and Tri-Partite Review.

Aspect observed	Mean Duration (mins) and Range (mins)
Pre-lesson meeting with student	7 (0 – 25)
Student’s lesson	58 (50 – 60)
Post-lesson debrief	32 (12-40)
Tri-Partite Review	36 (13-70)
Total of above	133 (110 – 160)

Classes observed: Yrs 7,8,9,10,11

Location of Tri-Partite Review – All the Science reviews occurred in a school laboratory sat at a lab. bench. All the MFL reviews occurred in a small, private room in ‘easy chairs’.

A. Preparation made by student for lesson observation and Tri-Partite Review

- 1. Welcome/thanks offered to mentors on arrival/at departure e.g. met at school reception / staff room etc.**

Yes (4) e.g. college tutor enthusiastically welcomed on arrival at reception, offered tea/coffee and thanked on departure.

No (4) – mentors went straight to the classroom to observe the student’s lesson. In two cases the student’s previous teaching commitment prevented a pre-meeting and discussion.

APPENDIX 10

Appendix 10. Example of the procedure used for summarising data from the interview survey.

PGCE (sec) SCIENCE and MODERN FOREIGN LANGUAGES

Early Teaching interviews (Feb/March 2001).

Summary data. 5 pairs Sci and 5 pairs MFL = 20 respondents.

Section A General Mentoring Aspects

1. What does mentoring, within the PGCE programme, mean to you?

Guidance (6), Help/when needed (4), Security/A crook to lean on (2), Someone who takes care of you, Encouragement, Advice, Good ideas, An experienced teacher, Selective observation.

How has mentoring helped you?

Giving help/specific help to me when needed (3), Knowing what to expect of pupils, Seeing a range of teachers perform, Getting used to the day-to-day life of a school, It's been absolutely vital – I couldn't have got through TP without my mentor, Very approachable people, Very good for me but others had variable experiences, Very different reactions from students exposed to the same mentor.

How has mentoring hindered you?

My new/alternative ideas suppressed (2), Limited amount of feedback (2), Lesson plans discussed after the event which is too late to make changes for teaching, The 1h per week was shared between us, Subject Mentor not 100% sure of their role, 1h session mainly chit-chat, College tutors try to clone us, You need to let students take risks on occasions.

2. How has your pair / small group placement in the school influenced your mentoring experiences?

Advantages

Co-observation was good (3), Sharing resources (2), Good to have someone else in the same position (2), Help, Good to have someone else to talk to, Could sometimes sort out issues without needing mentor, Opportunity for discussion, Good to share ideas, 2 students : 1 mentor is better

Disadvantages

You should get more time if placed on your own (mentor time shared), Subject Mentor kept complaining of lack of time to do the job, There was a conflict of mentoring role with that of HOD, None, 2 students and 2 teachers trying to share one KS4 class was too much for all.

APPENDIX 11

Appendix 11. Example of the procedure used for summarising data from the Tri-Partite Review survey.

Student, Subject Mentor and College Tutor comments about the Tri-Partite Review concerned with the first Teaching Practice completed in Jan. / Feb. 2001

1. Location, location, location – does the venue and seating arrangement matter?

Subject Mentors:

Yes. A private, comfortable and pleasant environment should be chosen.

There should be no interruptions.

Seating should be grouped.

PGCE students:

A quiet place with no interruptions.

Mentor on same side for support.

There should be a break after the lesson debrief before the Tri-Partite Review.

College tutors/managers:

A quiet, relaxed, place with no interruptions – interruptions occur frequently at present.

A private place – not the staffroom.

A table to spread out papers and a circular or 'democratic' seating arrangement, facing each other.

2. How long is needed to (realistically) undertake a Tri-Partite Review – range experienced was less than 15 mins to 150 mins (mean about 35 mins) per student.

Subject Mentors:

This is very dependent on the trainee but cover for 1 hour should be arranged.

A typical lesson debrief and review should take 40-60 mins.

The lesson debrief and review should not occur in the lunch break.

PGCE students:

Variable but usually 30-40 mins.

One hour should be booked for the review.

The Tri-Partite Review should not be on the last day of a placement.

College tutors/managers:

20 – 150 minutes (range)

45 minutes (mode)

57 minutes (mean)

1 hour should be set aside for the Tri-Partite Review.

Have a break before the review.

Students in difficulty take a long time.

There's a real problem with the amount of time I can give.

APPENDIX 12

Appendix 12. A copy of the letter sent to PGCE (sec) Science and Modern Foreign Languages Course Leaders in ITT providers in England (May 2001)

23rd May 2001

Dear colleague,

I am a tutor in the Department of Science and Technology at St. Martin's College, Lancaster. Approximately half of my teaching duties are concerned with our 1 Year PGCE (secondary) Science course.

I am currently undertaking research into PGCE (secondary) students' perceptions of mentoring. The data from the 2000-2001 cohort will be collected by questionnaire, observation and interview. I will also examine the college's documentary material on mentoring within the PGCE (sec) programme.

The main focus of my work is to try and establish those aspects of mentoring which are seen as *valuable, by students*, for the planning, delivery and evaluation of their lessons. I am also interested to see if student perceptions of mentoring are similar in different subject areas. To this end I am undertaking the work with Science and Modern Foreign Language PGCE students.

My work will be informed by published material on mentoring, although the majority of this reflects opinions of experienced teachers / researchers. There does not seem to be much relevant and recently published work on PGCE (sec) students' perceptions of mentoring, operating under DfEE Circular 4/98.

I am writing to PGCE Course Leaders in Science and Modern Foreign Languages at all the major ITT providers in England and Wales. I am asking you to send me any information that you have related to the focus of my research. This may be published / unpublished work, a piece of 'action research' or references to articles which could be useful. If you do not know of any relevant material a nil response would also be appreciated.

Please complete and return the attached proforma / reply slip.
I have enclosed a s.a.e. in anticipation of your help.

Very many thanks,

Yours faithfully,

Paul Burrill

Proforma and Reply Slip:

* Name of Science/MFL Course Leader and ITT Provider (obtain details from Initial Teacher Training –performance profiles. (TTA September 2000). I've highlighted all the relevant ones.

The focus of this research is on PGCE students' perceptions of mentoring.
In particular, to establish those aspects of mentoring which are seen as valuable by students, for the planning, delivery and evaluation of their lessons.

1. Do you have/know of any material relevant to this study? Yes / No

2. Please give references of any relevant published work.

3. Are any additional papers related to unpublished work / action research included with this reply slip? Yes / No

4. Would you be willing to be contacted again in respect to this research Yes / No
If yes please supply your telephone number and e-mail address.

Telephone Number (including STD code) _____

E-mail address _____

Thank-you, very much, for your help.
Please return the completed proforma in the s.a.e.

Paul Burrill - Tel. **** * (direct line)

- E-mail: *****